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RECENT EXCAVATIONS IN ISRAEL: STUDIES IN IRON AGE ARCHAEOLOGY

Edited by
SEYMOUR GITIN
WILLIAM G. DEVER

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RECENT EXCAVATIONS IN ISRAEL:
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and
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Dedication

This volume is dedicated to the memory of Yigal Shiloh, preeminent Israeli archaeologist, Director of the City of David Excavations in Jerusalem, and true friend and supporter of the American Schools of Oriental Research. May his work serve as an inspiration to all who seek the joy of discovering their past.

Contents

Foreword ix

Preface xi

Chapter 1. The Arrival of the Sea Peoples: Cultural Diversity in Early Iron Age Canaan
Trude Dothan 1

Figures for Tel Miqne-Ekron Excavation Project 15

Chapter 2. Tel Miqne-Ekron: A Type-Site for the Inner Coastal Plain in the Iron Age II Period
Seymour Gitin 23

Chapter 3. Archaeological Evidence for Movements of the Early "Sea Peoples" in Canaan
Moshe Dothan 59

Chapter 4. The Collared-rim Jars and the Settlement of the Tribe of Dan
Avraham Biran 71

Chapter 5. Judah and Jerusalem in the Eighth–Sixth Centuries B.C.E.
Yigal Shiloh† 97

Chapter 6. The Beginning of the Greek Settlement in Palestine in the Light of the Excavations at Tel Dor
Ephraim Stern 107

Chapter 7. New Data on the Relationship Between Judah and Edom Toward the End of the Iron Age
Itzhaq Beit-Arieh 125

Chapter 8. Instrumental Neutron Activation Analysis and the Origin of Iron Age I Collared-rim Jars and Pithoi from Tel Dan
Joseph Yellin and Jan Gunneweg 133

Chapter 9. Archaeology in Israel Today: A Summation and Critique
William G. Dever 143

Foreword

This collection of papers from the 1985 American Schools of Oriental Research Symposium, originally entitled "The Impact of Recent Archaeological Excavations and Publications on the History of Ancient Israel," is a fitting tribute to one of the participants, the late Yigal Shiloh. His small essay is intended to highlight some of the major trends in the archaeology and history of Israel in the Iron Age.

The organizers of this volume, Seymour Gitin and William G. Dever, are uniquely qualified to speak to this issue since their scientific work at Tel Miqne and Gezer has contributed so much to this subject. Although it was not possible to include all the papers of the 1985 Symposium, it was felt that the present grouping of essays could stand on their own and contribute an important body of knowledge.

As series editor, I would like to thank Steve Goranson and Lealan Swanson, who have assisted in the technical aspects of this volume. To all of those at Eisenbrauns who helped, I'd also like to express my gratitude.

Eric M. Meyers
Durham, N.C.
November 26, 1987

Preface

For several years, the American Schools of Oriental Research (ASOR), at each of their annual meetings, have been highlighting the archaeological fieldwork and research conducted in one of the Middle Eastern countries in which ASOR is active. An entire session is given over to invited papers by leading archaeologists from one of these countries, with complementary papers and responses presented by American colleagues. The annual meeting held November 22–26, 1985, in Anaheim, California, featured archaeological research carried out in present-day Israel.

This volume contains most of the papers presented at the Anaheim meeting as they were delivered. Some papers have been updated to include new information and supplementary graphics have been added. Four presentations are not included because either they have been published in part in other journals, or they had been committed to other publications before the symposium. Moshe Kochavi's paper: "Cannaan in the 13th–12th Centuries B.C.: New Archaeological Data and their Historical Implications," is not included. Abraham Malamat's presentation: "Ancient Israelite Warfare in the Conquest/Settlement Period," has already appeared in part in *Symposia Celebrating the Seventy-Fifth Anniversary of the American Schools of Oriental Research (1900–1975)*, edited by F. M. Cross (Cambridge, MA, 1978), 35–55. Dr. Malamat's paper also appeared in *Revue Internationale d'Histoire Militaire* 2 (Tel Aviv, 1979). Lawrence Stager's presentation: "Merneptah, Ashkelon, and the Sea People," has appeared in *Eretz-Israel* 18 (1985) 56–64. David Stronach's paper on: "From Proto-Aeolic Capital to Achaemenid Protome: Reflections on the Political Significance Given to the Stone Column from Solomon to Darius," is not included in the present volume. One paper that was not given at the Anaheim meeting is included because of its technical relevance to the other works. This is Joseph Yellin and Jan Gunneweg's paper entitled "Instrumental Neutron Activation Analysis and the Origin of Iron Age I Collared-rim Jars and Pithoi from Tel Dan," which appears as chapter 8.

The authors and editors of this volume are grateful to ASOR and its Program Committee, chaired by James D. Muhly, for helping to organize the lecture program. We are grateful to ASOR President, James A. Sauer, and to ASOR Vice President in charge of Publications, Eric M. Meyers, for supporting the publication of the manuscripts as an *Annual* of the American Schools of Oriental Research. We wish to thank USAID for a special grant that provided travel funds to the United States for three of the Israeli lecturers, and for five participants from Lebanon, Jordan, and Egypt. These monies were given to the Albright Institute under the Regional Cooperation Project (Grant 298-0158.06, 3/85). Special thanks for encouragement and the USAID support go to William R. Brew, Counsellor for Economic Affairs, American Embassy at Tel Aviv; Mayer Yaskil, Program Specialist at the American Embassy at Tel Aviv; and Arthur Green, Director of the American Cultural Center in Jerusalem.

In Turkish Palestine in 1900, with the opening of the school in Jerusalem, now the W. F. Albright Institute of Archaeological Research in Jerusalem, ASOR began what would become a series of in-country institutes. A major part of American archaeological research in modern-day Israel is still carried out through the Albright Institute. It is a special honor for the editors, who are both present and past directors of the Albright Institute, to be able to present this volume as a showcase of recent archaeological developments in Israel. We are especially indebted to our Israeli colleagues who helped make this symposium such a success.

Seymour Gitin
W. F. Albright Institute of
Archaeological Research

William G. Dever
University of Arizona

August, 1987

The Arrival of the Sea Peoples: Cultural Diversity in Early Iron Age Canaan

Trude Dothan
The Hebrew University, Jerusalem, Israel

The accumulating evidence from recent excavations and research on the material culture of the Philistines and other Sea Peoples has made the time ripe for a reassessment of their initial appearance and settlement in Canaan. Controlling any such reassessment is the recognition that cultural change during the transitional period from the Late Bronze Age to the early Iron Age I was not uniform or simultaneous throughout the country. Rather, this period was characterized by a complex process in which indigenous Canaanite, Egyptian, Philistine, and Israelite cultures overlapped for certain periods.

The nature of this transitional period in Philistia has become better understood in light of the recent excavations at Tel Miqne-Ekron. At this site, ceramic and architectural evidence from secure stratigraphic contexts makes it possible to distinguish for the first time a stylistic development within the monochrome Mycenaean IIIC:1b repertoire, and to assess its connection to and impact upon Philistine Bichrome Ware. In addition, the archaeological data from Miqne-Ekron provides a fresh context in which to view the questions of absolute chronology both for Philistia and for greater Canaan.

New finds from the most recent excavations at Miqne-Ekron that reflect the transformation of late Philistine culture at the end of the eleventh and the beginning of the tenth centuries B.C.E.

Recent excavations and research on the material culture of the Philistines and other Sea Peoples have provided much new evidence to refine our understanding of their appearance and settlement in Canaan after the end of the Late Bronze Age. This accumulating evidence provides us with the opportunity of reassessing the Sea Peoples' role in this historical period, not only in Canaan, but throughout the ancient eastern Mediterranean world.

This paper assesses evidence from new excavations in Philistia and the surrounding areas that may allow us to distinguish the internal development of culture in Philistia proper, to compare this development with that of settlements outside Philistia, and on this basis to establish a reliable relative chronology. Several recent articles dealing with the end of the Late Bronze Age and the beginning of the Iron Age in Canaan are based on the assumption that cultural change in Canaan in this period was both uniform and simultaneous (Oren 1985; Ussishkin 1985 and 1987: 36–37). This paper attempts to demonstrate, rather, that the transitional period from the Late Bronze Age to the Iron Age in Canaan, which saw the breakdown of the Canaanite city-state system, was a complex process in which a diverse cultural landscape was produced. The cultural changes that took place in this period should, therefore, not be seen to be applicable to all sites since indigenous Canaanite, Egyptian, Philistine, and Israelite cultures apparently overlapped for certain periods.

The archaeological evidence for the initial arrival in Canaan of the Sea Peoples was first distinguished in the excavations of Ashdod, where the Late Bronze Canaanite culture was succeeded by a culture characterized most clearly by the appearance of Mycenaean IIIC:1b pottery (Stratum XIII). The settlement of Stratum XIII was in turn succeeded by a fortified settlement, where the dominant pottery was Philistine Bichrome Ware. The earlier idea that the Philistines arrived suddenly in the country at the time of the war with Ramesses III therefore had to be revised in light of the finds from Ashdod. The appearance of Mycenaean IIIC:1b pottery between the end of the Late Bronze Age and the first appearance of the characteristic Philistine culture seemed to indicate a prolonged process of arrival and settlement by Aegean groups who may have been precursors of the Philistines.

The Nature of the Late Bronze-Iron Age Transition in Philistia

The ongoing excavations at Tel Miqne—now convincingly identified with the Philistine pentapolis city of Ekron—have confirmed the evidence uncovered at Ashdod (see figs. 1.10–1.15). In addition to distinguishing the succession of cultures (typified by the ceramic sequence (1) Late Bronze Age Canaanite ceramics and imported wares, followed by (2) Mycenaean IIIC:1b and no imported wares, followed by (3) Philistine Bichrome Ware). It has also permitted a first glimpse of internal development within them (T. Dothan and Gitin 1982, 1983, 1985, 1986).[1]

Most of the information on the history of Miqne-Ekron has come from Field I NE, a sondage on the northeast slope of the ancient city's acropolis under the supervision of Ann Killebrew. This sondage provided new insights into the history of Tel Miqne-Ekron, which was thought to have been established by the Philistines in the twelfth century B.C.E. (based on a survey of the low-profile tell; Naveh 1958). From the outset of the excavations, it was hoped that the Field I NE sondage would provide a definitive date for the establishment of the city at Tel Miqne-Ekron. The results of the sondage indicated that permanent settlement at Tel Miqne-Ekron began long before the arrival of the Philistines. Sherds from Chalcolithic, EB I, EB II, and MB IIA–B periods in mixed fills and mudbricks and settlement remains from the Late Bronze Age I–II indicated the extent of the site's earlier occupational history.

Of particular interest in Field I NE was our discovery of a level (Stratum VIIIB) containing evidence of the typical Late Bronze Age Canaanite culture of the late thirteenth century B.C.E. The area of the city of this period uncovered in the sondage was primarily domestic in character and may have been situated outside the fortifications of the city. In terms of pottery repertoire, Tel Miqne-Ekron Stratum VIIIB is similar to the other Canaanite cities of this period, with connections to Cyprus, the Aegean, and Egypt. Although only a limited area has so far been excavated, the finds indicate that in the Late Bronze Age, Tel Miqne-Ekron was the site of an important and flourishing city similar in character to other well-known Canaanite urban centers of this period.

In the succeeding and last Late Bronze Age level (Stratum VIIIA), however, were some finds that are not widely encountered in Canaan in this period and which hint at the establishment of new cultural connections at the very end of the Late Bronze Age. Among the finds in Stratum VIIIA were a number of fragments of large kraters of Anatolian Grey Polished Ware, with wavy incised decoration and heavy burnishing (fig. 1.1), that have close connections to Troy (Buchholz 1974). Although further seasons of excavation at Tel Miqne-Ekron will hopefully clarify the historical significance of these new cultural elements, it is possible that these vessels may represent an expansion of the normal channels of trade and communication of the city at the very end of the Late Bronze Age.

Traditionally, the clearest criterion for defining the transition between the Late Bronze Age and the Iron Age culture of Canaan has been the end of maritime trade links to the Aegean and Cyprus and the disappearance of imported Mycenaean and Cypriote wares. As early as the excavations at Ashkelon in the 1920s, Garstang and Phythian-Adams suggested that the Late Bronze Age culture was immediately succeeded, after a destruction of the city, by the first appearance of Philistine wares. As we

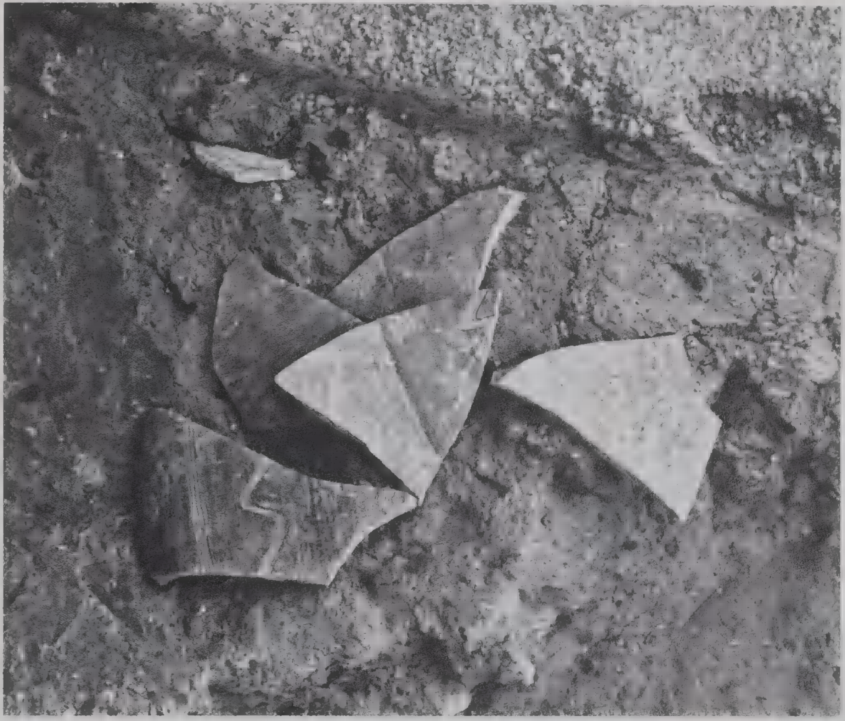

Fig. 1.1. Sherds of Anatolian Grey Polished Ware with wavy incised decoration and heavy burnishing. Stratum VIIIA, end of thirteenth century B.C.*, Field I NE, Area 5.*

have mentioned above, the Ashdod excavations expanded this picture, suggesting that an earlier variant of Aegean-inspired pottery (the Mycenaean IIIC:1b ware) was distinguished immediately above the Late Bronze Age destruction layer. Recently, however, this succession of cultures has been questioned by some scholars who see a continuation of the Egyptian-Canaanite culture of the Late Bronze Age even after the cessation of imports. The absence of both imported Mycenaean IIIB and Philistine Bichrome Ware in Stratum IX at Tel Sharia and in Level VI at Lachish has been interpreted by the the Late Bronze Age destruction layer. Recently, however, this succession of cultures has been questioned by some scholars who see a continuation of the Egyptian-Canaanite culture of the Late Bronze Age even after the cessation of imports. The absence of both imported Mycenaean IIIB and Philistine Bichrome Ware in Stratum IX at Tel Sharia and in Level VI at Lachish has been interpreted by the excavators as evidence of a continuation of the local Canaanite culture at those sites to the second half of the twelfth century B.C.E. While this situation is possible for Sharia and Lachish, it may be somewhat of an oversimplification to date the earliest appearance of Philistine pottery in the heartland of Philistia itself on the basis of the situation at these outlying sites.

Our recent excavations at Tel Miqne-Ekron have provided what may be a convincing refutation of this hypothesis, since in the stratum following the cutoff of imports (Stratum VII) there is evidence of a distinct change both in the material culture and in the architecture of the site. While imports cease, locally-made Mycenaean IIIC:1b pottery appears for the first time (fig. 1.2; Gunneweg and others 1986).[2]

The sudden appearance of this pottery style hints at something more than the trading contacts of the previous period. Previous discoveries of Mycenaean IIIC:1b ware in Philistia have underlined its close relationship to the types manufactured on Cyprus in the Late Cypriote IIIA period, which have in turn been linked to the arrival of Achaean immigrants. The finds at Miqne have strengthened the

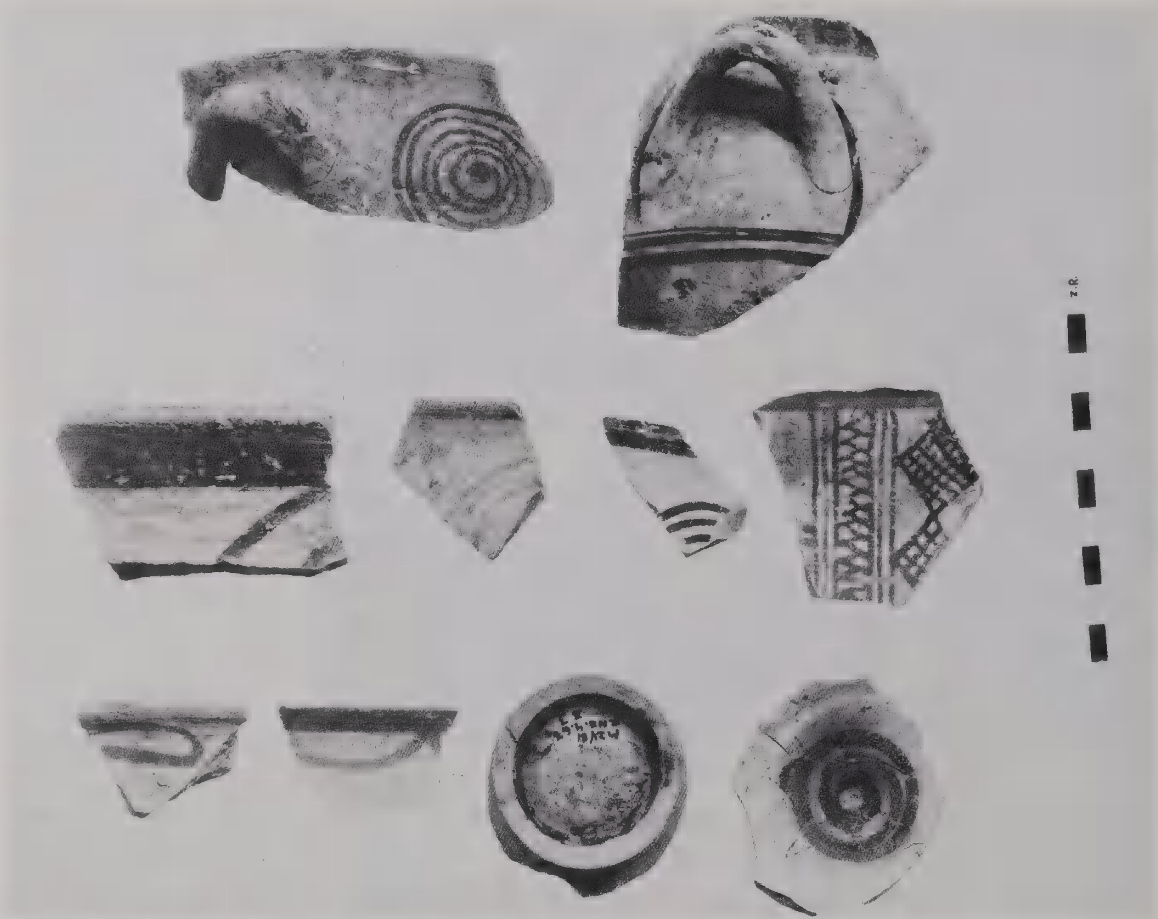

Fig. 1.2. Selection of Mycenaean IIIC:1b sherds. Stratum VII, first third of twelfth century B.C., Field I NE.

evidence for the arrival at this time of a new ethnic element in Canaan that shared many of the same artistic traditions of the contemporary settlers on Cyprus. And at Miqne-Ekron, in addition to the decorated types, Aegean-inspired domestic vessels such as the *lekane* and cooking pots also appear.

The Mycenaean IIIC:1b pottery is not the only evidence of new features at Miqne-Ekron in this period. After the destruction of the Late Bronze Age city, new architectural features are evident. In the area of the Field I NE section, a former domestic area was replaced by an industrial or workshop area in which new floors were laid and unique square kilns were built (fig. 1.3). This phenomenon is similar to the situation in Ashdod Stratum XIIIB, where an industrial area was also constructed and connected with the manufacture of Mycenaean IIIC:1b pottery (M. Dothan and Freedman 1967, M. Dothan 1971). At Miqne-Ekron, the establishment of an industrial area was coupled with the construction of a massive mudbrick wall surrounding the area. The stratigraphic context of these fortifications indicate that they were built in the earliest phase of the post-Late Bronze Age settlement. So it seems evident that the settlement of Stratum VII represents a major, well-organized urbanization effort.

The Stylistic Development of Mycenaean IIIC:1b Ware in Canaan

The substantial nature of the Stratum VII settlement is evident in the accumulations of ash and kiln refuse, the laying of superimposed floor levels, and the construction of kilns. The sheer quantity of

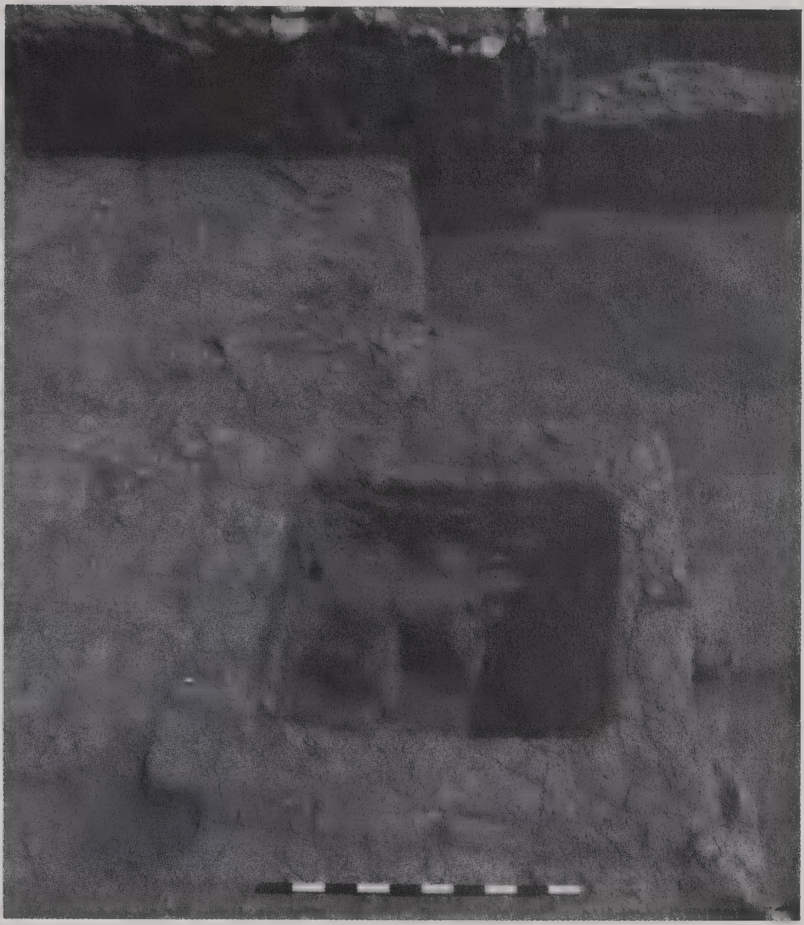

Fig. 1.3. Square kiln. Stratum VII, first third of twelfth century B.C., Field I NE, Area 4, facing south.

Mycenaean IIIC:1b pottery has offered us an opportunity to note a possible stylistic distinction and its stratigraphic context. While the decorative motifs of the pottery in the earlier phases (Stratum VII) have affinities with the so-called "Simple Style"—decorated primarily with plain horizontal bands or antithetic spirals—of Mycenaean IIIC:1b in Cyprus, the Aegean, and the Levant (at sites such as Tarsus and Ras Ibn Hani, the latter excavated by the French in 1975; Bounni and others 1976, 1977, 1978), the later phases at Miqne-Ekron (Stratum VI) also include pottery of the so-called "Elaborate Style"—with pictorial decoration, divisions into metopes, and use of the fish and bird motifs in a highly stylized manner (fig. 1.4; Kling 1985). There is an important difference between these two classes of pottery, for where the Simple Style is characterized by its spare use of decoration, the Elaborate Style features intricate, detailed designs over nearly the entire surface of the vessel.

A recent study of the emergence of Philistine culture has suggested that Philistine Bichrome Ware (fig. 1.5) was the result of a purely local typological and stylistic development from the earlier Mycenaean IIIC:1b types (Mazar 1985). From the limited material so far excavated from secure stratigraphical contexts at Miqne-Ekron, however, the Mycenaean IIIC:1b pottery reveals continued contact with the stylistic trends of the Aegean world. The appearance of the Elaborate Style after the Simple Style has been distinguished at a number of sites in the eastern Mediterranean, particularly on Cyprus at Sinda between Levels II and III, at Kition in Area I (between floors IIIA and IV), and at Enkomi in Level IIIA (Kling 1985).

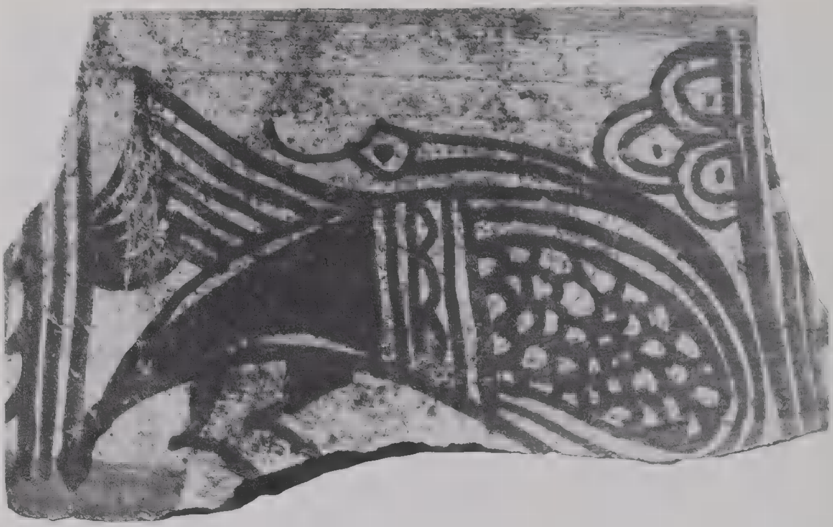

Fig. 1.4. Bird design on early Philistine Bichrome krater. Stratum VI, twelfth century B.C., *Field I NE, Area 4.*

The possibility that the arrival of the Elaborate Style at Miqne-Ekron was not due to purely local stylistic developments seems to be confirmed by simultaneous changes in the character of the city. In the area of the NE section already excavated, the industrial area was apparently modified to serve domestic purposes. And simultaneous with this change in function of the area in Stratum VI, the earliest examples of the characteristic Philistine Bichrome Ware appear together with the Elaborate Style. The emergence of the characteristic Philistine Bichrome Ware therefore seems to have been an extremely rapid development based primarily on the contemporary Elaborate Style, which was not the earliest variant of Mycenaean IIIC:1b found at Miqne.

The evidence from Miqne-Ekron may be recapitulated as follows: After the destruction of the Late Bronze Age city, major changes in architecture and material culture are observed, beginning in Stratum VII with the construction of a massive mudbrick wall and the transformation of a domestic area into an industrial area. Coupled with these architectural changes, imports ceased and locally made Mycenaean IIIC:1b pottery of the Simple Style is encountered in large quantities for the first time. These major changes cannot be seen as a local development but rather appear to be the work of a group of settlers, Sea Peoples, who came to Miqne-Ekron, founded a major city, and brought with them the technical skills to produce monochrome Mycenaean IIIC:1b in the styles then current in the Aegean. In the next phase of Stratum VI, the Elaborate Style of Mycenaean IIIC:1b is introduced, a pottery style that shows a new stylistic impetus contemporary with stylistic changes occurring simultaneously in Cyprus. This development may point to a subsequent influx of settlers with close links to the Aegean, who brought with them firsthand knowledge of the newly developed Elaborate Style. This pottery, however, does not represent a total break with the first settlers, for certain forms from the Simple Style domestic repertoire, such as cooking pots (which have parallels in Cyprus and the Aegean), continue into this phase. In Stratum VI, the Elaborate Style pottery may have served as the direct prototype of the earliest Philistine Bichrome Ware.[3]

The Absolute Chronology of the Emergence of Philistine Culture

It is clear that the first appearance of the Mycenaean IIIC:1b ware at Miqne-Ekron represents the arrival of a new cultural element and the start of a new stage in the life of the city. On the basis of the

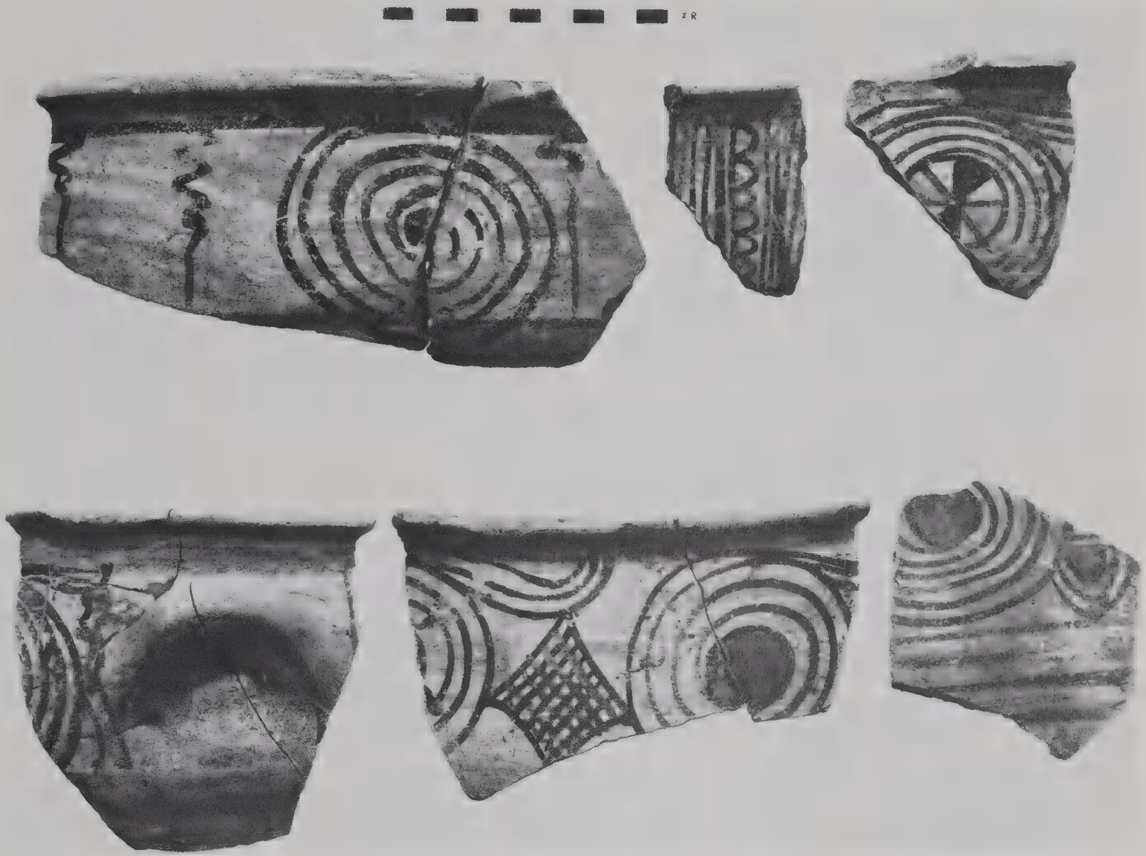

Fig. 1.5. Philistine Bichrome kraters. Stratum VI, twelfth century B.C.*, Field I NE.*

finds of the latest Mycenaean IIIB pottery at Deir ᶜAlla (Franken 1969), this stage must not be placed far from 1200 B.C. As I have mentioned, our ware in the earliest stages is primarily of the Simple Style (an early phase of Mycenaean IIIC:1b) and therefore represents the period immediately after the cessation of imports of Mycenaean IIIB ware. The appearance of the Elaborate Style slightly higher in the accumulation must therefore represent renewed contact at a slightly later period, when that style was becoming common in the Aegean and eastern Mediterranean.

I would suggest that the appearance of the Elaborate Style at Ekron should be connected with the first historically recorded appearance of the Philistines—early in the reign of Ramesses III—and that the emergence of Philistine Bichrome Ware occurred almost simultaneously. The recognition of *two* successive styles of Mycenaean IIIC:1b pottery at Miqne-Ekron has therefore provided us with new chronological evidence: the emergence of Philistine Bichrome Ware seems to be contemporaneous with the Elaborate Style, which in turn appeared slightly later than the Simple Style at Tel Miqne-Ekron.

For the chronological evidence for the time of the emergence of the Bichrome Philistine pottery at other sites in Philistia we still have regrettably little hard evidence. But the finds of Philistine pottery with the cartouche of Ramesses III at Gezer and a scarab of Ramesses III in Stratum XII at Ashdod point to the earliest appearance of Philistine Bichrome Ware during the reign of Ramesses III—not toward the end of the twelfth century as has recently been suggested.[4]

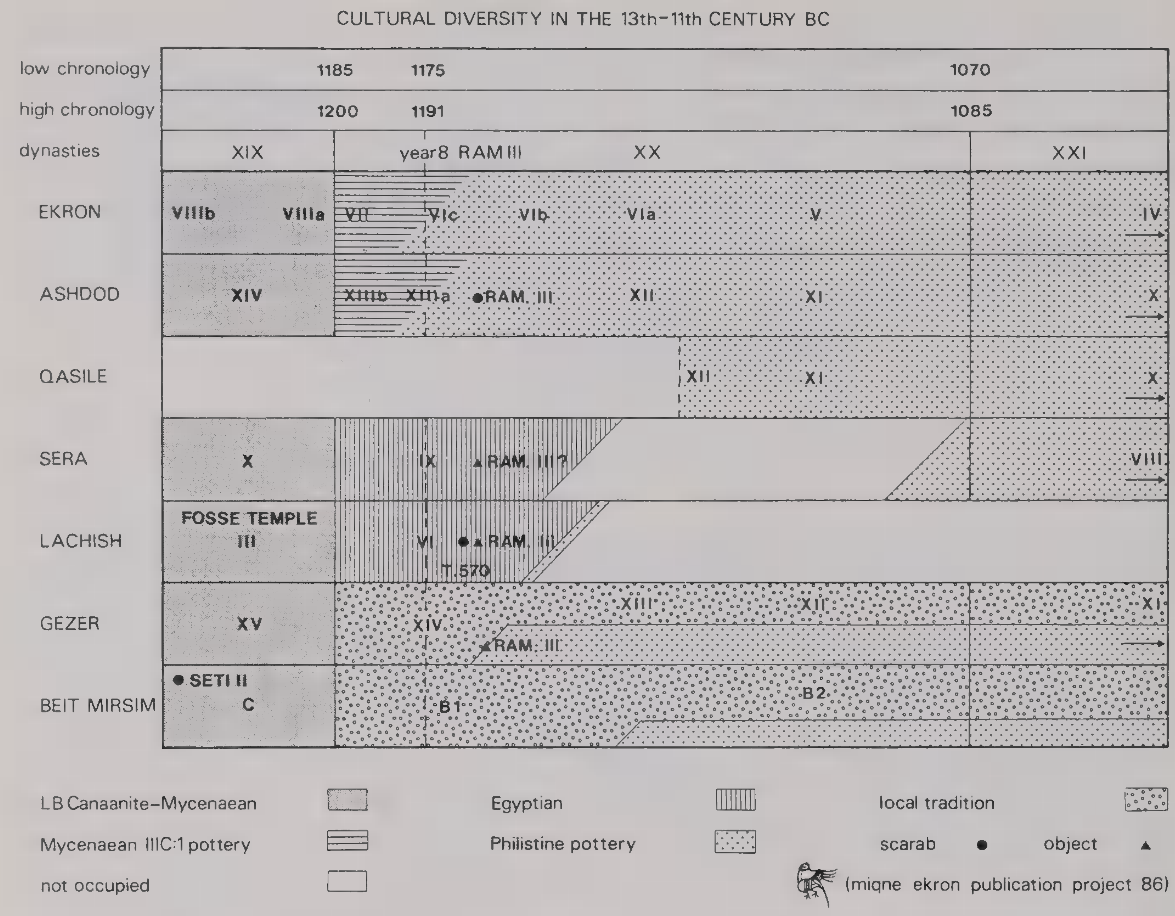

Fig. 1.6. *Chronology of the emergence of Philistine culture.*

The primary argument for a much later development of Philistine Bichrome pottery has been the lack of examples at primarily Egyptian sites that were occupied during the long reign of Ramesses III. As for the lack of Philistine material during the twelfth century at Tel Sharia and Lachish, both sites at which there is evidence of renewed occupation at the time of Ramesses III, the evidence is completely in accord with the historical situation as we know it. Neither of these sites were in the "heart of Philistia," but merely on its fringes (as noted also in Singer 1985: 114). There is no contradiction in recognizing that Egyptian influence in particularly strategic or valuable regions was reinforced simultaneously with the settlement of the Philistines in Philistia itself.

The historical-political situation in the eastern Mediterranean at the beginning of the twelfth century was one of fragmentation and cultural diversity due to the break-up of the Mycenaean world and the lessening of Egyptian power. That Ramesses III chose to tighten his grip on some places while he gave others over to the settlement of foreign groups is perfectly in accord with the evidence of his records, such as the Papyrus Harris, where he speaks both of extending his borders and settling foreign mercenaries in his garrisons. In fact, it would be a complete contradiction to what we know of the period to suggest, as some scholars recently have done, that the cultural changes in this period must be both simultaneous and uniform. Philistine pottery did not appear at one time all over the country and it is hardly surprising that it did not appear at Tel Sharia and Lachish until the end of the twelfth century or the beginning of the eleventh, when the Philistines extended their control and trading connections beyond their original coastal enclave.

But one does not have to go to the northern Negev to find evidence of the cultural diversity of the twelfth century B.C.E. At Tel Mor, probably the harbor town of Ashdod, the coexistence of Egyptian and Philistine culture is perfectly clear. At this site, after the initial settlement of the inland city by the Philistines and their predecessors from the Aegean, the Egyptians clearly maintained an outpost on the coast, and no early Philistine pottery was found there (M. Dothan 1972).

The matter of cultural diversity does not only concern Egyptian and Philistine culture. During the same period, the local Canaanite traditions held on in some places, particularly in the Shephelah. At sites like Tell Beit Mirsim (B1), Beit Shemesh (III), and nearby Batash (Timnah), the period between the end of the Mycenaean and Cypriote imports and the appearance of the first Philistine ware is typified by an absence of any but the most utilitarian wares. The gradual penetration of Philistine wares to some of these places during the course of the twelfth century does not require us to change the initial date of Philistine pottery, but rather to recognize the cultural transformation that was going on. From an original core of settlement in the heart of Philistia soon after 1200 B.C.E., the Philistine culture crystallized and eventually spread throughout all of the southern parts of the country, gradually taking over even the places where the Egyptian and Canaanite cultures of the Late Bronze Age most tenaciously hung on.

The excavations at Tel Miqne-Ekron continue, and we hope to expand the section on the northeastern slope of the acropolis and the work in other areas to uncover broader areas of the transitional period from the end of the Late Bronze to the Early Iron Age. But it is to be hoped that the finds we have already uncovered and their connections to the contemporary cultures of Canaan may change the direction of the study from a monolithic interpretation of cultural change in this period to a new understanding of the role of the Philistines in the period's cultural diversity.

The Transformation of Philistine Culture at Miqne

This brief survey of the diverse cultural landscape of the country in the twelfth century may underline the significance of the stratigraphic sequence we have distinguished at Tel Miqne-Ekron (see figs. 1.11, 1.14–17). In Stratum V, which may be dated to the eleventh century B.C.E., we find the Philistine culture in its full floruit, as evidenced by the discovery of a building with clear cultic connections, significant because of its finds, but also because it may be the earliest Philistine sanctuary found in a city of the Pentapolis. A rectangular room was uncovered that had a heavily plastered floor running up to two oblong sockets (which may indicate the presence of standing architectural features that did not survive) as well as drainage channels. Two large adjacent stones were set in the western part of this floor, one of which had a hemispherical depression (fig. 1.7). In addition to a group of vessels that have parallels in the Tel Qasile temple, incised bovine scapulae were found (fig. 1.8), providing the most intriguing connection to this shrine.[5] Similar bovine scapulae were a distinctive feature in the twelfth century temples at Enkomi and Kition (Karageorghis and Demas 1985).

The fortification of Ekron began with the coming of the Sea Peoples. Although the last early Iron Age architecture in Field I NE dates to the eleventh century, ceramic finds point to occupation lasting to the beginning of the tenth century. This evidence coalesces with the remains in Fields III and IV of a large, fortified city that likely encompassed the entire tell and that lasted to the second half of the eleventh/beginning of the tenth centuries B.C.E. This city met a sudden end, perhaps as the result of a

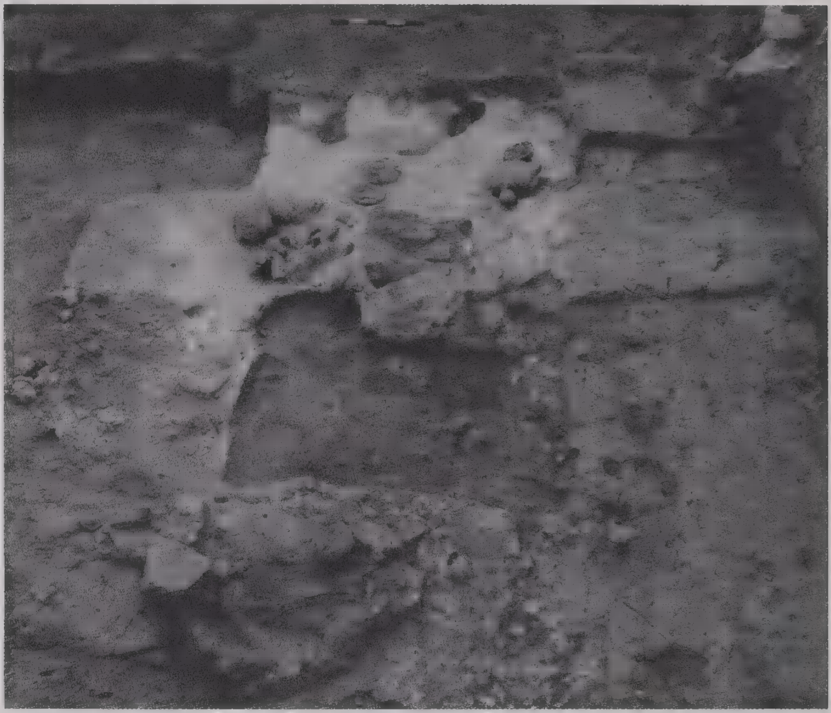

Fig. 1.7. Philistine sanctuary with heavy plastered floor, two oblong sockets, drainage channels, bowls, juglets, and bovine scapulae. Stratum V, first half of the eleventh century B.C. *Field I NE, Area 3, facing south.*

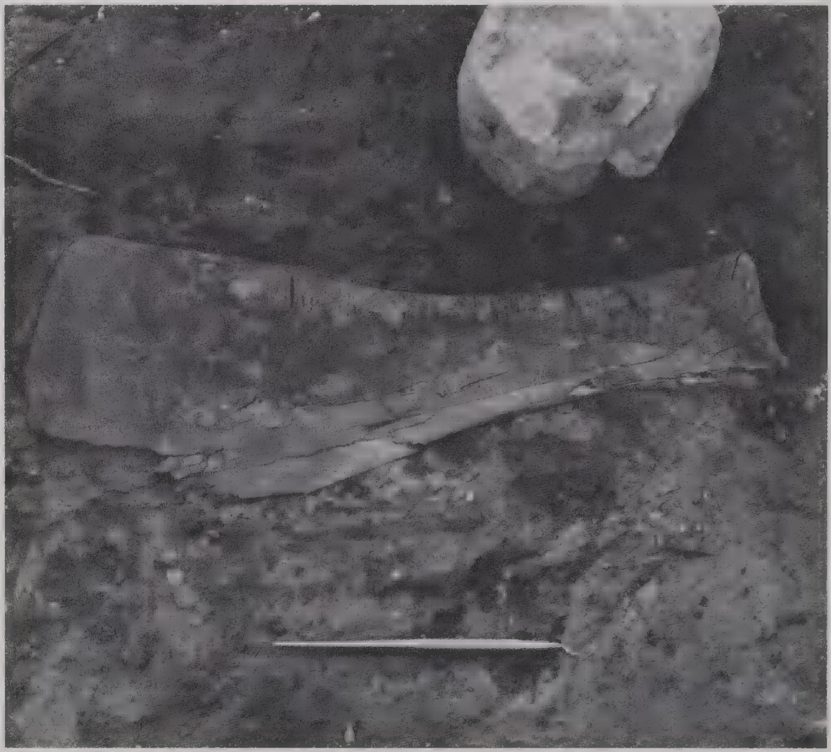

Fig. 1.8. Bovine scapula with incisions from Philistine sanctuary. Stratum V, first half of eleventh century B.C.*, Field I NE, Area 3.*

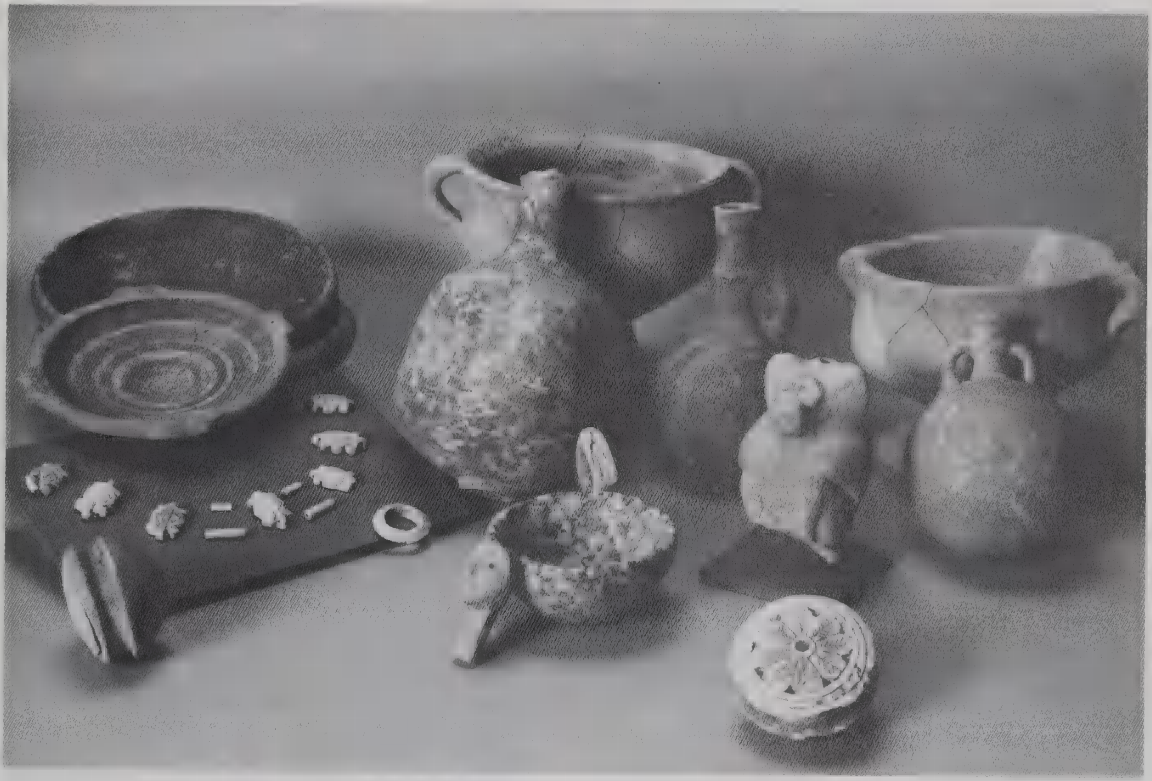

Fig. 1.9. Assemblage of pottery and objects, Stratum IV, second half of eleventh–early tenth century B.C. *Pottery on the left—incurved rim, red-slipped bowls, red-slipped and white painted bowl with perforated bar-handles; center/right—two trumpet-foot small kraters, red-slipped pomegranate, red-slipped juglet with black and white concentric circles and flask; objects of 21st Egyptian Dynasty, left to right—seven Hathor faience pendants, Sekhmet faience ring, painted limestone baboon, faience ear plug (earring) with rosetta decoration, speckled stone bowl, and ivory head inlay, etc.*

campaign by Siamun. For the next few centuries the city contracted in size and most probably was located on the northeast Acropolis, until a renewed expansion in the seventh century followed the outlines of the twelfth to eleventh century city.

In addition to the clear picture of the emergence of Philistine culture seen at Tel Miqne-Ekron, evidence of its final stages in the Iron Age I have been found. These finds illustrate the ultimate blending of the various cultural traditions in the earliest part of the Iron Age. In Field IV, beneath a level of the seventh century, a room was excavated that contained a large assemblage of special objects and pottery stacked on the floor. This assemblage demonstrates how the different cultural strands were beginning to coalesce by the end of the eleventh century B.C.E. The cache, related to Stratum IV and dated to the end of the eleventh century/beginning of the tenth, includes terra cotta vessels such as a unique kernos ring with a facing he-goat and she-goat, as well as stone, faience, and ivory objects, a speckled stone hemispherical bowl, a painted limestone baboon statuette, faience rings, spools, ivory inlays, and so forth (fig. 1.9). The group has striking affinities to the collection from the Qasile Stratum X shrine; to finds from Ashdod Stratum X; and to Egyptian New Kingdom art from the 21st Dynasty.

The date for this assemblage and of Stratum IV as a whole seems to fit the 21st Dynasty. On a political level, the postulated invasion by Siamun and the final stages of the distinctive Philistine culture seem appropriate as historical developments related to this stratum. The pottery from this level reflects a transition point in Philistine ceramics: the all-over red slip heralding the Iron Age II repertoire is introduced while the last echoes of bichrome decoration are retained. Here we have a unique testimony to the ultimate integration of the various styles that coexisted during the preceding century, and the fact of this cultural homogenization in the last stage of Philistine culture underlines the process of transformation that brought it into being.

Notes

Note: Excavation results and articles published since this paper was first delivered in November 1985 have been incorporated to bring it up to date.

[1] The excavation, directed by Seymour Gitin and the author, is a joint Israeli/American project sponsored by the W. F. Albright Institute of Archaeological Research, the Institute of Archaeology of the Hebrew University, Baltimore Hebrew College, Boston College, Brown University, the Lehigh Valley Center for Jewish Studies (Allentown College of St. Francis de Sales, Cedar Crest College, Lafayette College, Lehigh University, Moravian College, Muhlenberg College), and Southeastern Baptist Theological Seminary. Additional support comes from Aurora University and the Harvard Semitic Museum. The project is affiliated with the American Schools of Oriental Research and the Israel Exploration Society and has received generous support from the Dorot Foundation, Eugene and Emily Grant and Estanne Abraham.

[2] While imports cease, locally made Mycenaean IIIC:1b pottery appears for the first time. Oren's contention (Oren 1985: 55) that the appearance of Mycenaean IIIC:1b wares at Canaanite sites is merely a continuation of Late Bronze Age imports was decisively disproved for Philistia as early as 1971 (see Asaro and others 1971) and again more recently at Miqne-Ekron.

[3] For the identification of Mycenaean IIIC:1b with the Achaeans, see Stager 1985. Moshe Dothan, the excavator of Ashdod, has suggested that Mycenaean IIIC:1b and Philistine Bichrome Ware represent two successive waves of settlement. Recently, L. Stager, the excavator of Ashkelon, and A. Mazar, the excavator of Qasile, have proposed another possibility: that the monochrome Mycenaean IIIC:1b wares represent the coming of the Philistines during the reign of Ramesses III and that the development of the characteristic Philistine Bichrome Ware is a much later development due to the Philistines' adoption of local bichrome pottery techniques (Stager 1985, Mazar 1985).

[4] Although the chronological value of these artifacts has been questioned as providing only a *terminus post quem*, the fact that the evidence at several sites is parallel and that the archaeological situation matches closely the accounts of the Great Land and Sea Battles and subsequent settlement of the Philistines by Ramesses III seem to lend legitimacy for using these as absolute chronology indicators.

[5] An unincised scapula was found together with a *lekane* in a pit from this shrine dating to the twelfth century.

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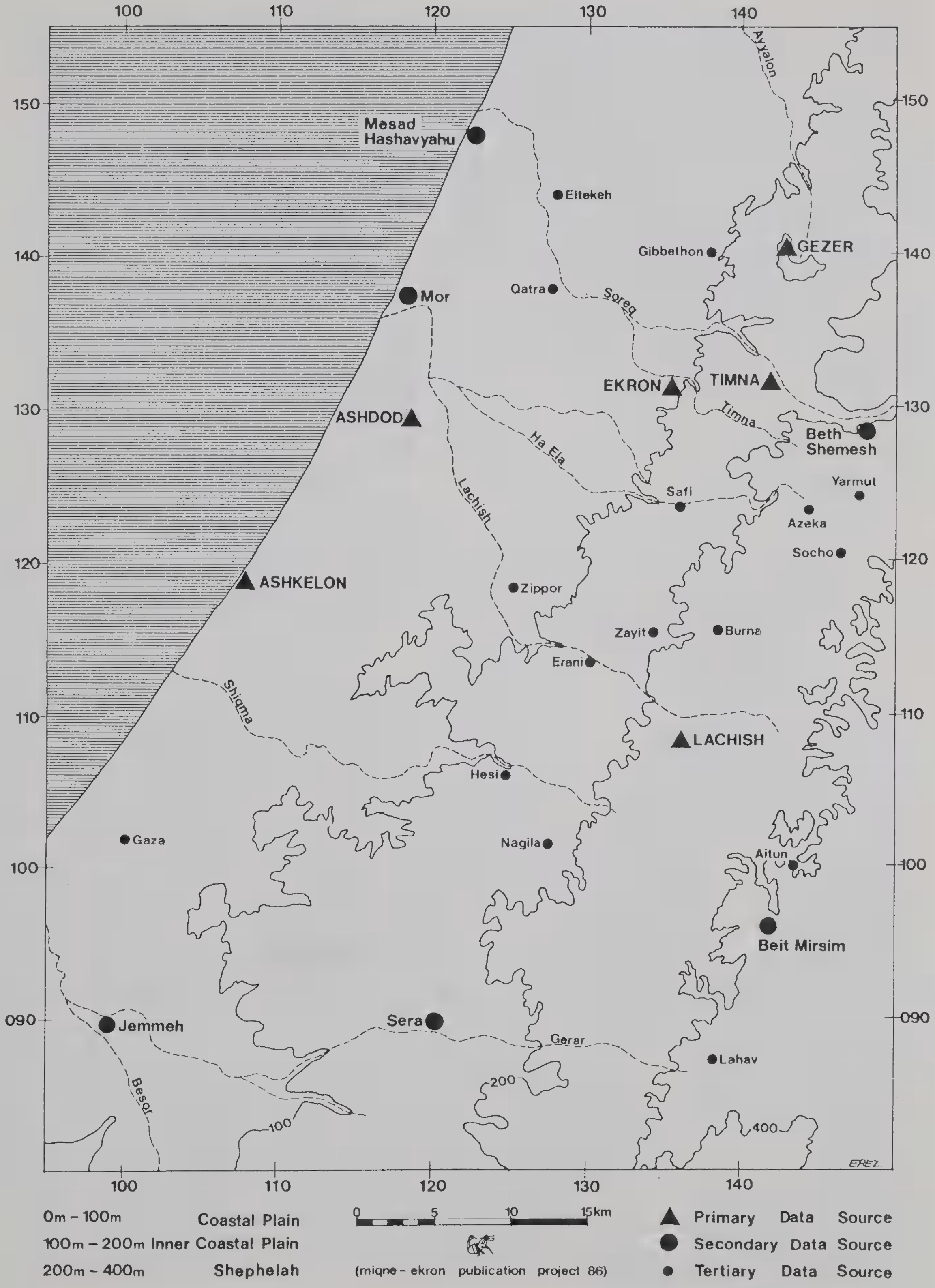

Fig. 1.10. *The Coastal Plain and Shephelah in the Iron Age.*

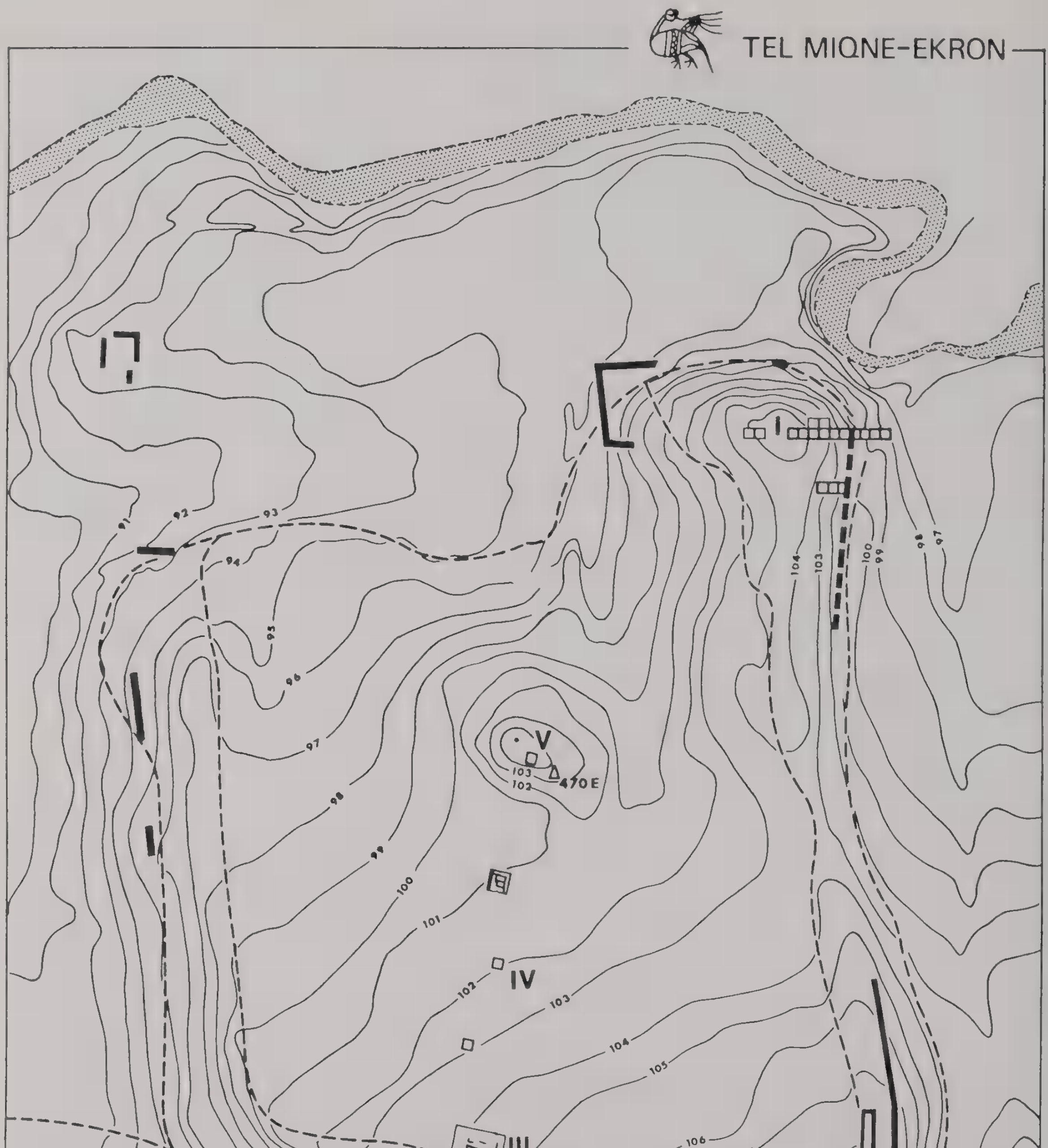

Fig. 1.11. Top plan with fields of excavations, facing north.

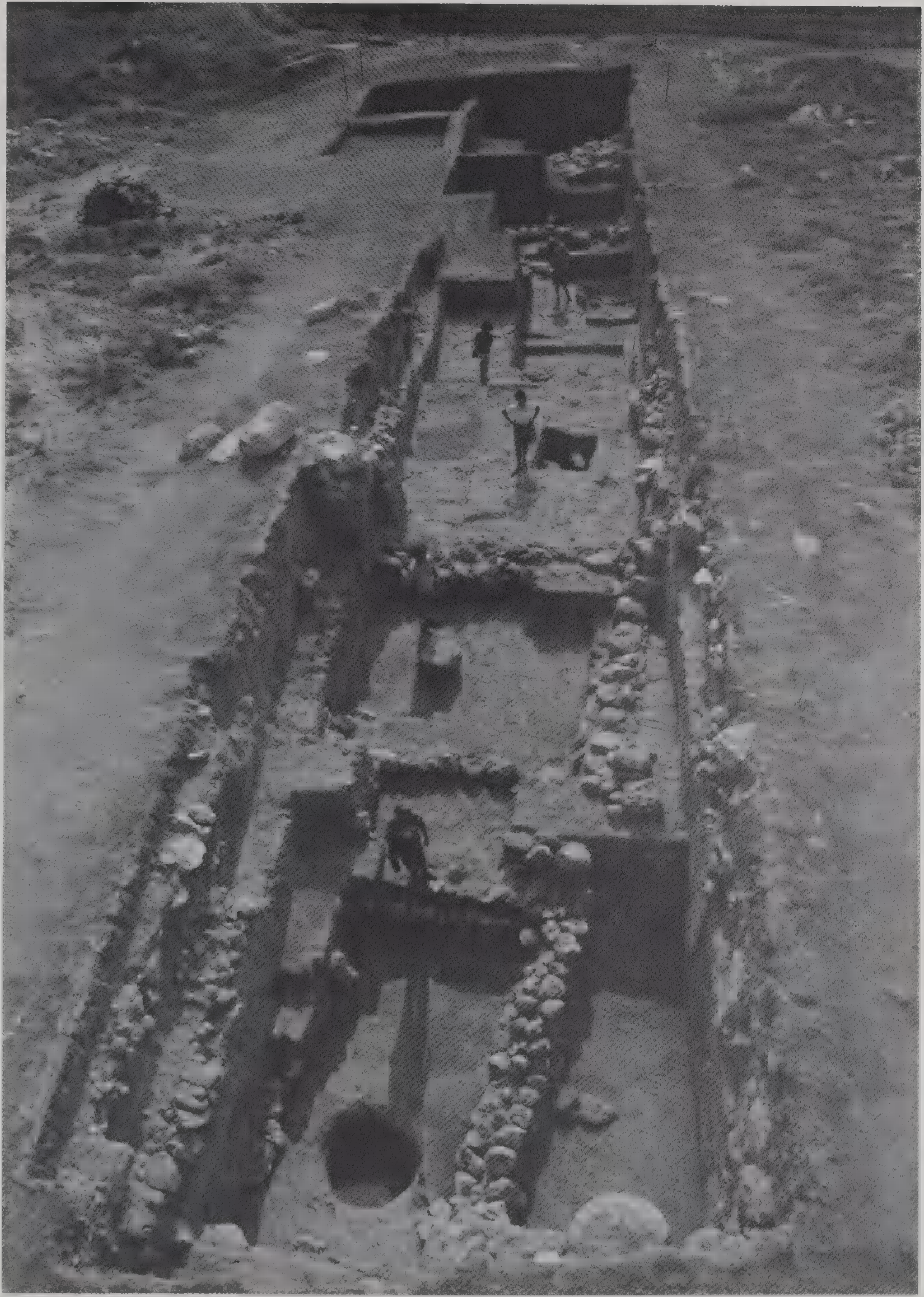

Fig. 1.12. Field I NE, eastern slope of Northeast Acropolis, facing east, 1986. Top to bottom: Strata V–VII, three Philistine Strata (foreground); Strata VIIIA–IX, three strata of Late Bronze II (background).

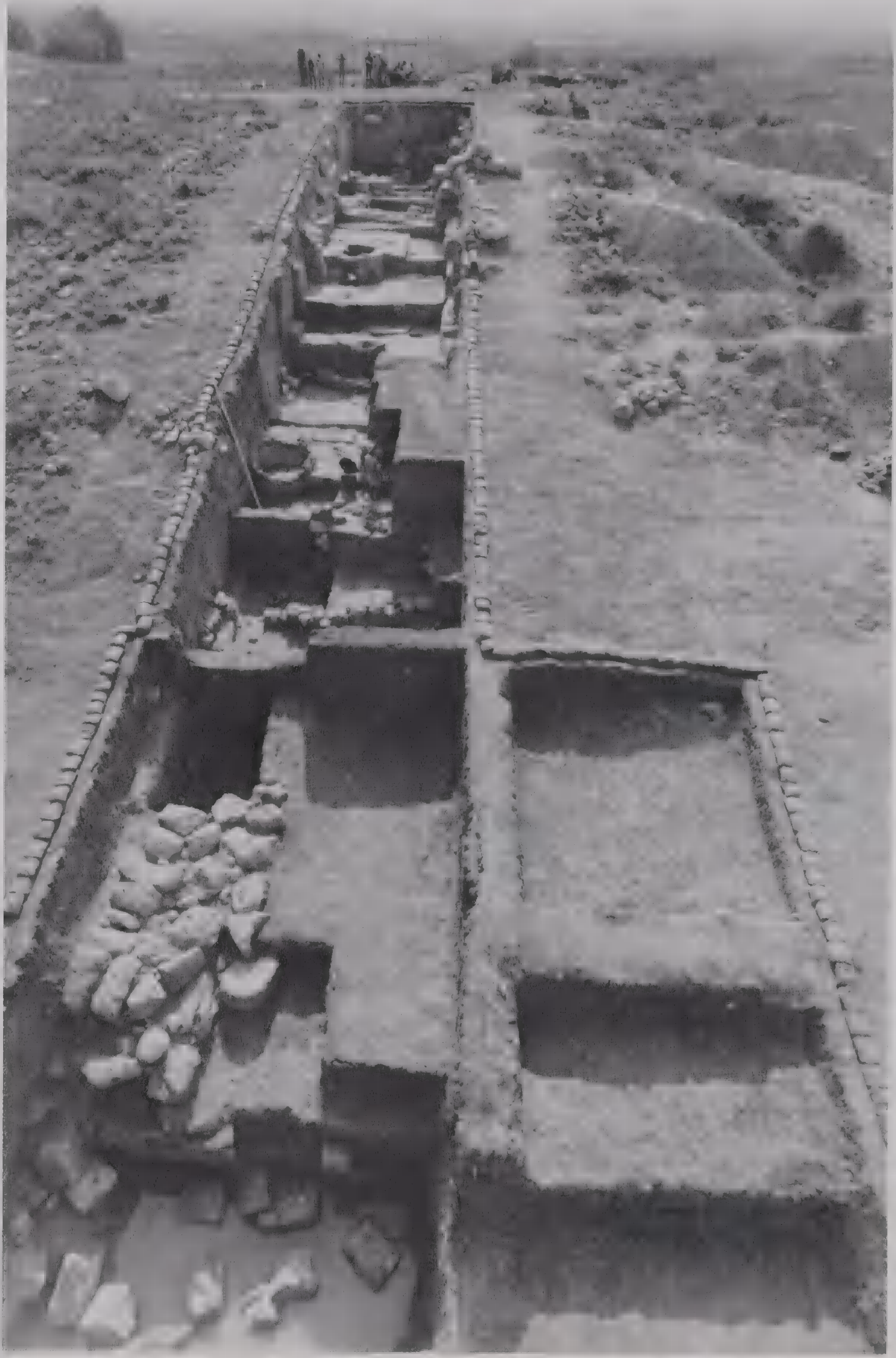

Fig. 1.13. Field I NE, eastern slope of Northeast Acropolis, facing west, 1986. Bottom to top: Strata III–IB, ashlar-faced mudbrick tower, Strata IX–VIIIA, Late Bronze II rooms, vat; Strata VII–V, three Philistine Strata with kilns.

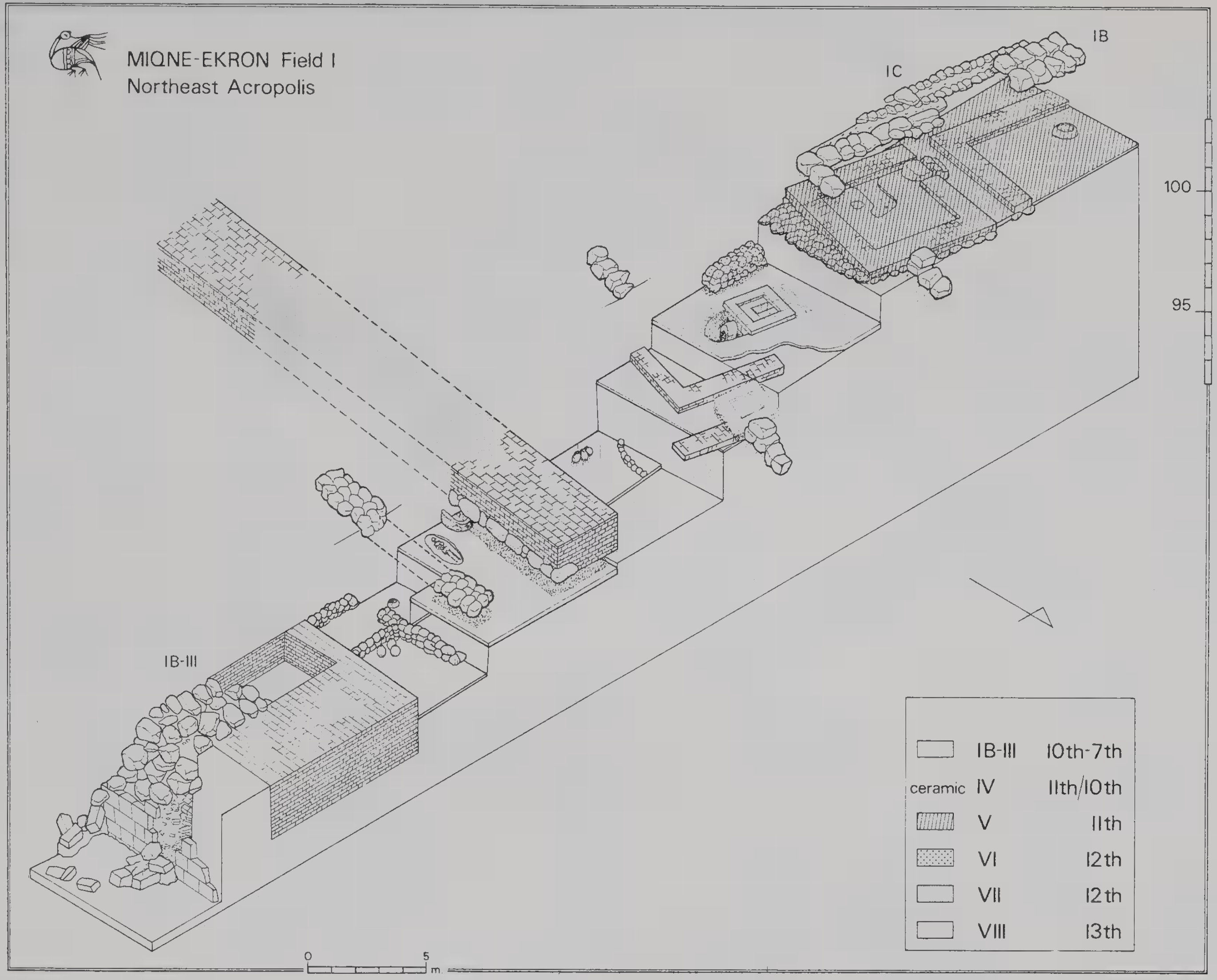

Fig. 1.14. *Isometric plan. Bottom to top, special features: ashlar-faced mudbrick tower and city wall, Strata III–IB; Stratum VIII, vat, beneath Stratum VII mudbrick city wall and kilns; Stratum V cultic room; Strata IB and IC, citadel towers and drain.*

TEL MIQNE-EKRON
STRATIGRAPHIC CHART

		Field Phasing										
General Strata	Periods Dates (BC)	INE/SE Sondages NE Acropolis		IISE Sounding SE Corner of Tel	IIISE/NE Horizontal Exposure South Central Face of Tel		IV		VSW Sounding, NW Acropolis	Survey 1957 Survey 1985	Historical Context (BC)	Diagnostic Pottery and Objects
							Soundings, Tel-Center SE,SW,NE	Horizontal Exposure NW				
	Modern Islamic-Roman	1 Agriculture/Burials 2 Squatters/Pits Abandonment •			1 Agriculture 2 Erosion Abandonment •		1 2 •		Buildings	•		
IA	7th/6th c.				Post 3 Cobbled Surface			Post 3 Rooms			Nebuchad–nezzar 603	
IB	last quarter 7th c.	Inner Wall Line	3 Citadel-Tower	City Wall Offset	City Wall Gate, Tower Oil Industrial Complex Street, Inner City Buildings	3A Plaster Roadway	Roadway Building Courtyard Room	3A Domestic Buildings and	•	Inner/Outer City Walls Gate House Outer Tower Stables		Coastal, Judean Assemblages
IC	1st 3 quarters 7th c.					3B Cobbled Roadway		3B Public Area		Industrial Belt Along City Wall 102 Olive Oil Installations	Assyrian Vassal State Sennacherib 701	Assyrian Ware 4-Horned Altars
IIA	2nd half 8th c.		4 Citadel-Tower Drain		—		— •				Sargon II 712	lmlk Stamped Handles Judean Forms
IIB	1st half 8th c.	Ashlar Faced City Wall	•		—		—				Semi-Independent City State	
III	10th/9th c.		•		—		—					Samaria Ware Wheel-burnish
IV	2nd half 11th-early 10th c.	5 •		•	Gate Tower Platform	Tower Room Industrial Install-ation Building	Mudbrick Structure	4 Buildings (cultic)	•	•	City State Philistine Pentapolis	Red Slip and Hand-Burnish, Egyptian XXI Dynasty Objects Debased Philistine
V	1st half 11th c.	Revet-ment City Wall	6A-D Cultic & Domestic Buildings 7 Domestic Building		City Wall Revetment Gate?			Wall Elements		•		Philistine Bichrome Less Elaborate More Elaborate
VI	2nd two-thirds 12th c.		8A-C Domestic Building		•		•					
VII	1st third 12th c.		9A-D Industrial Areas-Kilns		•	•					Sea People Settlement	Mycenaean IIIC:1b
VIIIA	end 13th c.	10A-B Domestic Areas 10C Bronze Industry			•						Canaanite City Egyptian XIX Dynasty	Gray Trojan & WP Wheel-made Cypriote Wares
VIIIB	13th c.	11A-C Domestic Area Vat (burial)										Local Painted BRII, WSII, WSH
IX	15th/14th c.	12A-C Rooms Installation							•		Canaanite City Egyptian XVIII Dynasty	BRI, Monochrome
Late Bronze I		•					•					
Middle Bronze IIA-C		•		•	•		•	•				
Early Bronze I, II		•		•	•		•	•	•	•		
Late Chalcolithic		•			•							

Ceramic Evidence Only •
Destruction ▬
Occupation Gap —
Local Fire -.-.

Fig. 1.15. Stratigraphic and Chronological chart after six seasons of excavation and survey, 1981–1987.

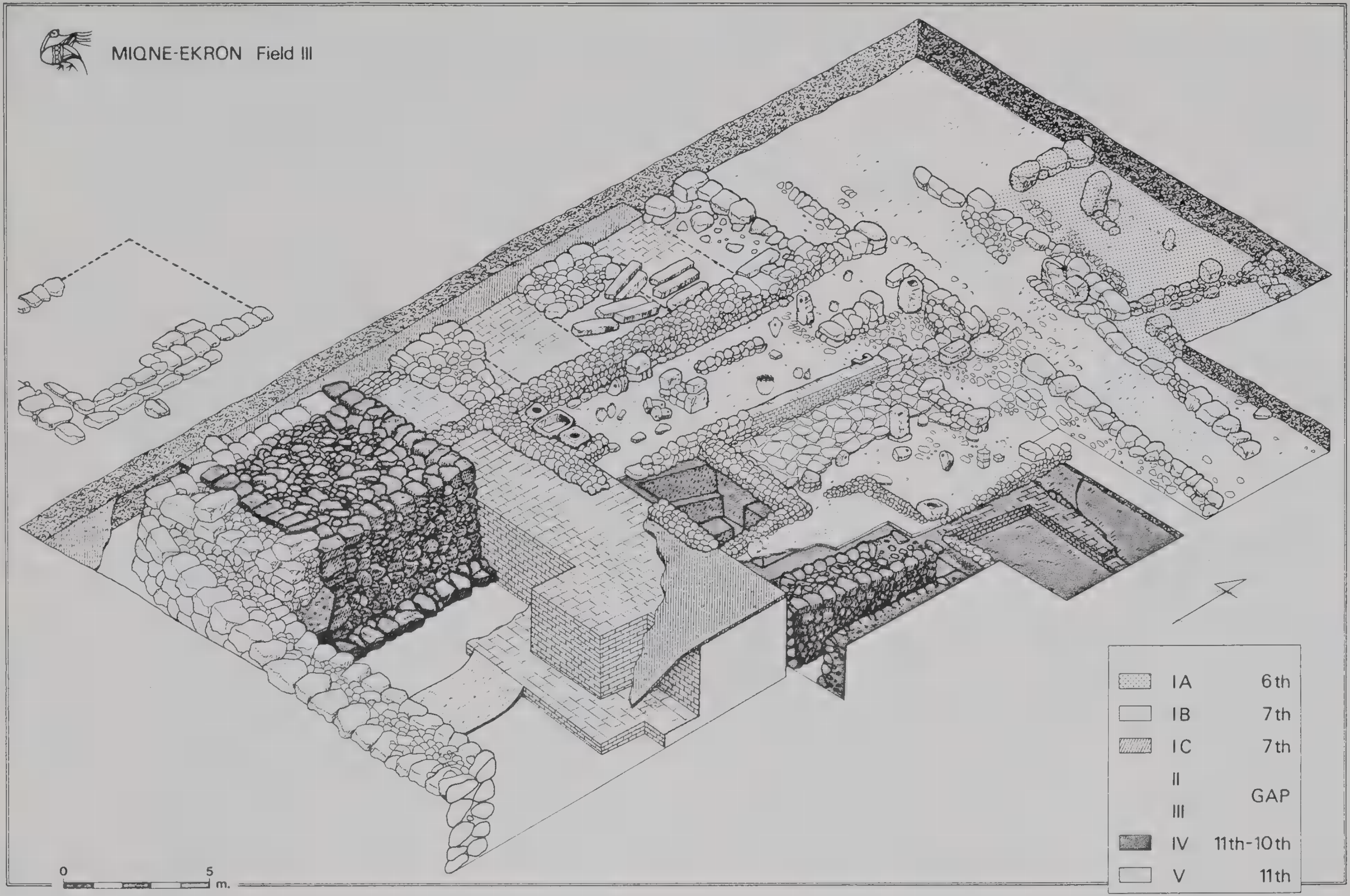

Fig. 1.16. Isometric plan, south-central face of tell. Stratum V mudbrick city wall; Stratum IV stone tower and mudbrick walled rooms immediately beneath Stratum IC stone buildings of southern industrial zone with olive oil installations, four-horned altars; street separates southern and northern industrial zones; courtyard building of Stratum IA built over northern industrial zone.

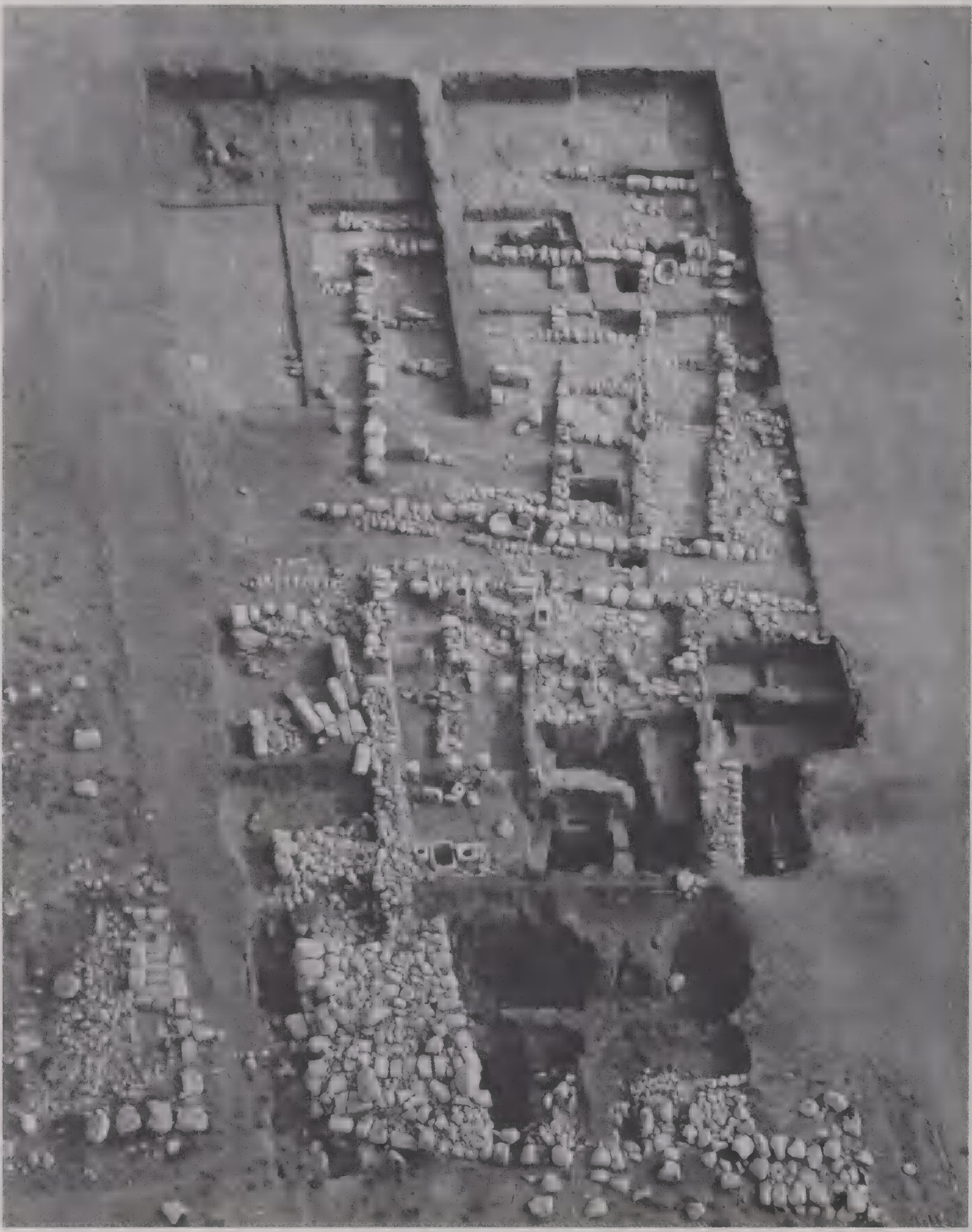

Fig. 1.17. Field III SE/NE, south-central face of tell, facing north: Stratum IC city built directly on mudbrick city wall and rooms of Stratum IV (lower right); Strata IB–C city wall and three entryway gate (left), two buildings with olive oil installations of southern industrial zone (center), street (center) separating southern and northern industrial zones; Stratum IA courtyard building (upper right) above partially excavated northern industrial zone, Rooms 9, 12 and 64.

Tel Miqne-Ekron: A Type-Site for the Inner Coastal Plain in the Iron Age II Period

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Tel Miqne-Ekron, one of the capital cities of the Philistine Pentapolis and the largest site associated with the Inner Coastal Plain, is located on the border separating the Coastal Plain of Philistia from the Shephelah of Judah. Its strategic position makes it a potential type-site for Philistia and for the frontier zone of the Inner Coastal Plain as well as a prime candidate for testing the extent of interregional connections between Judah and Philistia in the Iron Age. During the Iron Age, Tel Miqne had an upper and a lower city, the former confined to the Northeast Acropolis and the latter to the large, flat, 40-acre area below, south and west of the Northeast Acropolis. Only in the twelfth through the early tenth centuries B.C. and the seventh century B.C. were both of these areas occupied simultaneously. In between, for a period of about 270 years, the lower tell was unoccupied. During the 600 years of the Iron Age, Ekron went through a four-stage process of growth, decline, regeneration, and partial abandonment. In its last major phase of occupation, under the influence of Assyria, it grew to over 60 acres and became a major industrial city, with the largest known center for olive oil production in the ancient Near East. Analysis of architectural and ceramic data indicates that the Strata IB–C seventh century B.C. city had a well-conceived plan of four occupation zones containing structures with specific discernible functions. These were grouped into two main topographic areas: (1) the outer cities, including fortifications and industrial zone; (2) the inner city with domestic and private building zones. Based on texts and excavations results, geopolitical, economic, and environmental reasons are posited for the major transitions in the life of the city, specifically for the massive growth of Ekron in the seventh century B.C. The ceramic evidence and the general archaeological record also indicate that in the seventh century B.C. Ekron exhibited strong coastal traditions and a minimal Judean presence.

In the last ten years, archaeological research has had a major impact on our understanding of the history of ancient Israel during the Iron Age II period, specifically during the eighth and seventh centuries B.C. in Judah and its adjacent areas. Two factors, a revised chronology and an increased awareness of regional diversity, have been primarily responsible for altering a well-established body of scholarly opinion developed over a period of forty-five years, beginning with the first coherent publication of the Iron Age II ceramic corpus from Tell Beit Mirsim (Albright 1932: 64–89). This consensus, founded on the dating of the destruction of Lachish III to the 597 B.C. campaign of Nebuchadnezzar and on a small sample of excavated sites in Judah and Philistia, was last summarized in two synthetic studies during the mid-1970s (Stern 1975: 32–36; Holladay 1976: 261, 266, 270–71). It was also at this time that what had been a long-held minority opinion—dating the Lachish III destruction to the 701 B.C. Sennacherib siege—gradually began to gain wider acceptance (Rainey 1975: 47–60). This was precipitated by the published results of the excavations at Beersheba (Aharoni 1973: 5–8) and of the renewed excavations at Lachish (Ussishkin 1977: 31–57). By 1981 there were few scholars who did not accept the 701 B.C. date (Mazar 1981: 60–61). Thus a new chronological basis was created for evaluating the archaeological data of the Iron IIB–C periods. In addition, during the past decade many new sites were investigated in southern Israel within the framework of a regional approach.[1] The combined effect of a revised chronology and an increased and more broadly based sample of evidence drastically modified the rather simplistic view of the commonality of material culture and produced a new, more complex appreciation of subregions of material culture.[2] One of these subregions is the Inner Coastal Plain.

A natural frontier zone, separating the Shephelah from the Coastal Plain, the Inner Coastal Plain or Eastern Plain is an 80-km-long narrow strip of land, strategically located between the 100-m and 200-m topographical contour lines. In the north, in the Valley of Ajalon above Tell Gezer, it is 6 km wide, and in the south 17 km in width as it broadens out below Tel Sera into the Naḥal Besor Basin. Its rich alluvial soil, formed as deposits of terra rossa, was washed down through the Naḥal Soreq, the drainage system for the Judean Hill Country (Orni and Efrat 1971: 41–43). On the south bank of the Wadi Timnah, one of the main arteries of this drainage system, lies Tel Miqne (Khirbet el-Muqanna^{c}), at map reference 1356–1362/1315–1321, about 3 km northeast of Kibbutz Revadim.[3] Rising 7 m above the plain and 50 acres in size, Miqne is the largest mound associated with the Inner Coastal Plain and among the largest Iron Age sites in Israel. Overlooking the ancient network of highways leading northeast from Ashdod to Gezer and inland via the Naḥal Soreq to Beth Shemesh, Miqne is situated on the edge of the natural and historical frontier zone separating Philistia and Judah. As such, it is a prime candidate for becoming the type-site of the subregion of the Inner Coastal Plain.

W. F. Albright was the first to survey the site in modern times. In 1924, based on ceramic evidence, he identified it with biblical Eltekeh (Albright 1924: 8; 1925: 5–6).[4] In 1957, in a survey for the Department of Antiquities that included a large, previously unrecognized section of the tell, Joseph Naveh suggested the identification of Ekron, one of the capital cities of the Philistine Pentapolis (Naveh 1958: 166–70).[5] Subsequent discussion in the literature has supported this conclusion based on a new perception of the size and strategic location of the tell in relation to biblical and extra-biblical texts (Wright 1966: 76, n 14; Aharoni 1979: 270–73).

In 1981, a long-term American/Israeli excavation program was initiated at Tel Miqne-Ekron by the W. F. Albright Institute of Archaeological Research and the Institute of Archaeology of the Hebrew University, under the direction of Trude Dothan and Seymour Gitin. The three main fields of excavation were supervised by: Ann Killebrew, Field I; Barry Gittlen, Field III; J. P. Dessel, Kathy Wheeler, and Yosef Garfinkel, Field IV.[6] The project is designed to investigate the political, cultural, and economic processes of interaction between Philistines and Israelites during the Iron Age, about 1200–600 B.C. The immediate goal is the formulation of a data base for the Inner Coastal Plain by which the permeability of the Philistine/Israelite border zone can be measured. The long-range goal is to evaluate the mutual effect of cultural and economic exchange on Ekron and other sites in the Inner Coastal Plain and the two adjacent zones for which it served as a frontier, the Shephelah of Judah and the Philistine Coastal Plain. The other primary targeted sites in this interregional program are Ashdod, Ashkelon, Batash-Timnah, Gezer, and Lachish (fig. 1.10; Gitin 1986: 10).

The research at Miqne-Ekron focuses on periods of rapid occupational transition. In these periods, the border status of the site makes it potentially an effective measure that sharply highlights shifting political realities, drastic modifications in ethnic interaction, and realignments of interregional exchange. The results of two pilot seasons of excavation in the spring of 1981 and 1982 and four major seasons of excavations in the summers of 1984, 1985, 1986, and 1987 indicate that there were four major occupational transitions in the Iron Age (Dothan and Gitin 1982–1987; Gitin and Dothan 1987: 197–99).

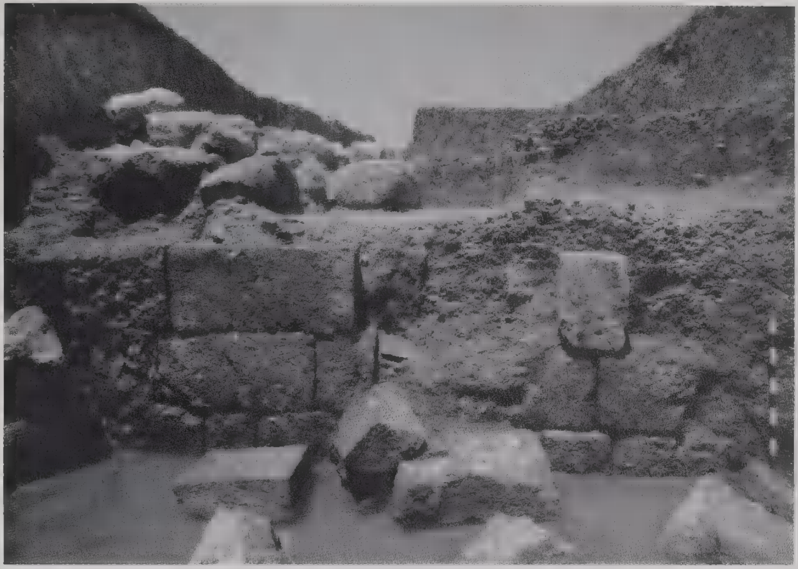


Fig. 2.1. Ashlar-faced mudbrick tower in a header-and-stretcher construction, Strata III–IB, bottom of sondage on Northeast Acropolis, Field I NE. Note fallen stones and dark ashy destruction debris above ashlars, facing northwest.

The first transition was from an agrarian Canaanite settlement of the LB II period to a large fortified city founded by the first Sea Peoples (Philistines) in the twelfth century B.C., a city that occupied the entire tell (T. Dothan 1987: 200–205; 1988: figs. 1.2–1.9; 1.11–1.17). The second was to a smaller fortified city in the tenth to eighth centuries B.C., concentrated in the area of the upper tell. The third was to an expanded, fortified city of the seventh century B.C., including both the upper and lower areas of the tell, the largest urban industrial center in the late Iron II period. The fourth was to a sixth century B.C. random unfortified settlement located only in the partially abandoned lower tell. It is the city of the third transition and its implications for understanding the critical role of the Inner Coastal Plain in the Iron Age II period that are the subject of the following discussion (Gitin 1987: 206–22).

Iron Age IIA–B Period—The Upper Tell (Field I NE/NW/SE, figs. 1.11–1.15)

In Stratum III, at the beginning of the Iron Age IIA period, in the second quarter of the tenth century B.C. the enormous Iron I Philistine city of Ekron, which in the previous two centuries had been one of the largest urban centers within the ancient borders of the land of Canaan, shrank in size to a small fortified city. The stratigraphic profile in the three main areas of excavation—the sondage on the Northeast Acropolis (Field I NE; fig. 1.13) the large horizontal exposure on the south-central face of the tell (Field III SE/NE; fig. 1.11), and the soundings and horizontal exposure in the center of the tell (Field IV SE, SW, NE, NW)—demonstrates that there were four Strata (VII–IV) of continuous occupation throughout the 50 acres of the tell in Iron Age I (figs. 1.14, 1.15). These are represented by a sequence of well-defined architecture and discrete ceramic horizons of Mycenaean IIIC:1b, Philistine Bichrome, and red-slipped pottery (T. Dothan 1988; figs. 1.2, 1.5, 1.9). This was followed by an approximately 270-year gap in occupation throughout the large, flat, 40-acre area of the lower tell (Fields III and IV). Only the upper tell, the ten-acre Northeast Acropolis (Field I) approximately the size of Tel Batash-Timnah, produced evidence of the tenth through eighth centuries B.C.

At the bottom of the 48-m-long Field I NE (fig. 1.13) sondage, below the present ground level of the cotton fields, a 7-m-wide mudbrick tower was found, faced with large blocks of ashlar masonry in header-and-stretcher construction and covered in part by boulder-sized stones (fig. 2.1). The tower was built against a mudbrick city wall that had two distinct construction phases. The *terminus post quem* for the construction of the tower and first phase of the city wall in Stratum III, the tenth/ninth century B.C. is provided by the latest pottery found in their mudbricks, red-slipped, in-curved-rim bowls (T. Dothan 1988; fig. 1.9). This is the most characteristic ceramic form of Stratum IV, the last phase of the Iron I period, as attested in Fields III SE and IV NW, with good eleventh/tenth centuries B.C. parallels in Qasile X–IX (Mazar 1985: fig. 39.6, fig. 52.2) and Gezer X–IX (Dever 1986: pl. 46:17). The ashlar-faced tower and mudbrick city wall were part of the fortification system that superseded the Iron Age I mudbrick city wall of Strata VII–IV, apparently encompassing the Strata III–II Iron Age IIA–B city of the tenth–eighth century B.C. on the upper tell. These fortifications may have been those depicted in the relief found at Khorsabad that portrays the siege of Ekron by the Neo-Assyrian King, Sargon II, in 712 B.C. It is in this relief that the first mention of the Assyrian name for Ekron, *ʾamqar(r)ūna*, is found (Botta and Flandin 1849: pls. 93, 99; Tadmor 1958: 83). They may also have been the fortifications that protected the city against Sennacherib in 701 B.C. (Pritchard 1969: 287–88). The few examples of the technique of ashlar-facing for mudbrick construction in the Iron Age II period are found at Ashdod (Dothan and Porath 1982: pl. III), Tel Sera (Oren 1982: 162), and Tel Haror (Oren 1985: 31).

No evidence of Strata III–IIB (directly relating to the city wall) was found due to the heavy erosion of the tell slope. However, on the top of the Northeast Acropolis, on a level 10.5 m above that of the ashlar-faced tower, sherds attributable to the tenth century B.C. through the first half of the eighth century B.C. were found in the foundation and fill of a Stratum IIA stone-lined drain. This seems to indicate that the remains of the earlier Iron Age IIA–B city are to be found farther west on the ridge of the Northeast Acropolis.

In Stratum IIA, the stone-lined drain was used with a two-phase citadel tower built of boulder-size stones. The latest pottery from the floor adjacent to the tower and from the drain, both sealed by walls of the Strata IB–C citadel tower, is from the second half of the eighth century B.C. (fig. 2.2). Also immediately west of the citadel tower in a series of probes in Field I NW, several surfaces produced eighth century B.C. pottery forms. Additional evidence for this period consisting of two *lmlk* stamped jar handles, one with the inscription *lmlk hbrn*, was found in the fill above a layer of heavy destruction debris that covered the ashlar-faced tower. The secure dating of *lmlk* stamped jar handles to Lachish III is the basis of attributing them at Ekron to Stratum IIA (Ussishkin 1977: 54–57). This occupation phase ended with the confrontation of Sennacherib and the Judean King, Hezekiah, in 701 B.C., resulting in the return of Ekron to Assyrian hegemony and the reinstatement of the Assyrian vassal, Padi, as King of Ekron (Pritchard 1969: 287–88).

Iron Age IIC Period—The Upper Tell (Field I NE, figs. 1.11–1.15)

Strata IB–C are represented by a second citadel tower, also constructed of boulder-size stones (fig. 2.2). That the tower had two floor levels indicating two occupation phases and was part of an extensive architectural plan is evident from aerial photos and surface survey. This plan also included olive oil installations dated to the seventh century B.C., based on the evidence from the lower tell in Field III SE.

The pottery associated with Strata IB–C is typical of the seventh century B.C. Albeit a small sample in terms of total numbers and whole forms, it is still sufficient to form a general impression of the function of the architectural units with which it was associated. The majority of ceramic forms found above and below floor levels of the large stone citadel tower for the most part consisted of small, ridged-rim holemouth jars, bowls, and kraters, similar to those found in Stratum IB in Fields III and IV (figs. 2.12:3; 2.13:7, 15). While other forms like store jars, jugs, and juglets are present, their numbers

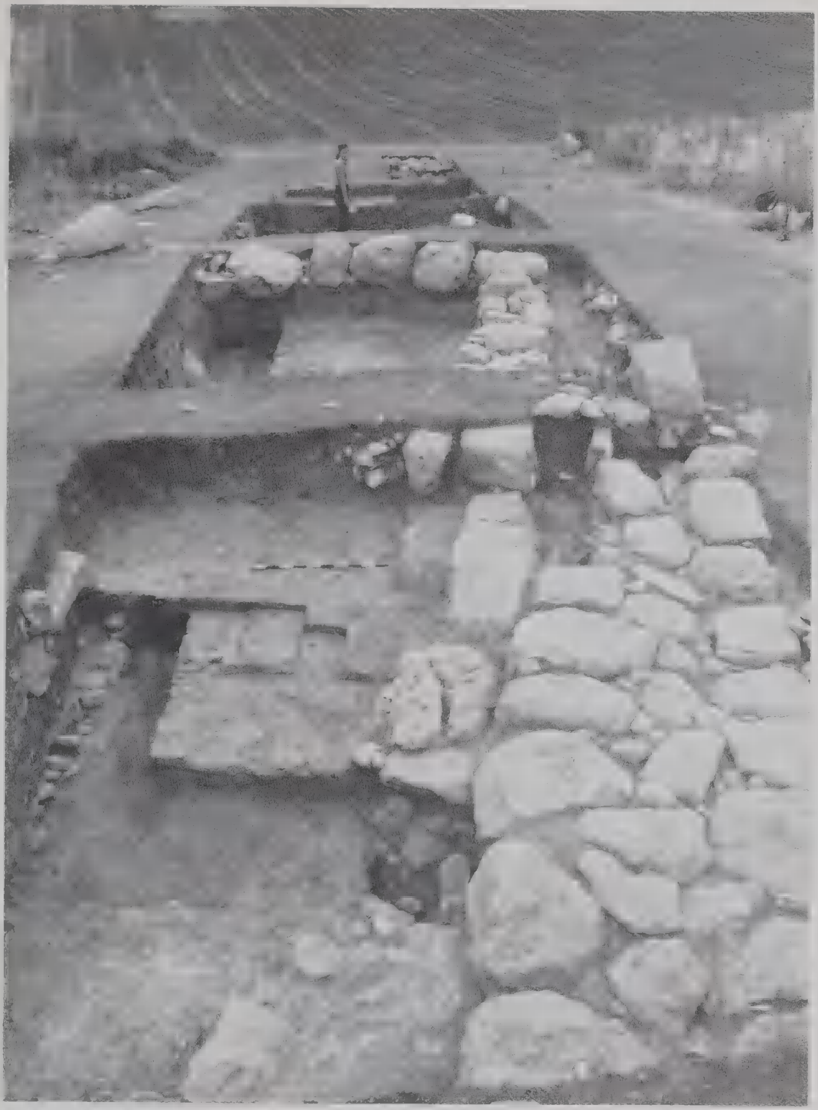


Fig. 2.2. Two citadel towers: three-row upper tower of Strata IB/IC on right in foreground built over exterior floor of lower tower of Stratum IIA on left in background. Top of sondage on Northeast Acropolis, Field I NE, facing east.

are relatively small. The general character of this ceramic assemblage could indicate second-stage food preparation or short-term food storage for small groups of people. This is consistent with the apparent function of these towers as part of the fortifications zone on the periphery of the outer city. A full discussion of the nature of the town plan of the seventh century B.C. city can be found below.

The ashlar-faced mudbrick tower and city wall, part of the fortifications system of Strata III–II, were also in use during the seventh century B.C. (fig. 2.1). This conclusion is based on the fact that the latest pottery from the mudbricks of the substantial rebuild of the second and last phase of the city wall and from the destruction debris that covered the ashlar-faced tower is dated to the seventh century B.C. Like the destruction of Stratum IB in Fields III and IV, the Field I NE destruction can be associated with Nebuchadnezzar's conquest of Philistia in 603 B.C. (Wiseman 1956: 66–71; Malamat 1975: 131). While the ashlar-faced mudbrick tower and city wall continued to protect the upper city in Strata IB–C on its north and east sides, its south and west sides may have been included within a new fortification system built to protect the lower city. A wall line, above and parallel to the ashlar-faced tower, was also found on the east slope of the Northeast Acropolis. It may have been the foundation for the inner wall of a double wall system which formed a stepped connection between the upper and lower parts of the seventh century B.C. city on the Northeast Acropolis.

Iron Age IIC Period—The Lower Tell (figs. 1.11, 1.15–1.17)

It was in Strata IB–C that the lower city was again occupied, spreading out over the low flat center of the tell, down the slopes, and beyond in the area northwest of the tell. Including the ten acres of the upper tell, the Strata IB–C city expanded beyond the limits of the 50 acres of the mound itself and greatly exceeded in size the large city of the Iron Age I period.

The sample of evidence from the lower tell includes Field III, the large horizontal exposure of 1,080 sq m in the center of the south face of the tell and Field IV, four soundings strategically placed along a 192 m section line extending north of Field III, across the center of the tell, and up to the base of the Northwest Acropolis. The sounding in the northwest quadrant of Field IV, in 1986, was expanded horizontally to include an area of 120 sq m. Additional soundings included Field II, located off the slope of the southeast corner of the tell, and Field V on the Northwest Acropolis. The survey of the lower tell and adjacent areas also produced valuable evidence.

Throughout the lower tell, the stratigraphic profile was identical. Stratum IC was founded directly on the Iron Age I fortifications and buildings of Stratum IV. Stratum IB, with an enormous quantity of restorable pottery sealed below a massive destruction debris with burnt roof tiles and collapsed mudbrick walls, was distinguished from Stratum IC by alterations in the building plan. Stratum IA, the post-destruction phase, was attested by disparate architectural remains constructed over the plan of Stratum IB.

The best preserved features of the city plan in the lower tell, most of which were originally constructed in Stratum IC, are to be found in Stratum IB. Well conceived, the Stratum IB city plan was designed by districts or zones. There were at least four such zones, each with its own specific purpose or occupational activity. Tentatively, these can be grouped into two main topographic areas of occupation: (1) the outer city, including the fortifications (city walls, stables, gatehouse, and gate) and industrial zones; (2) the inner city with its domestic and private building zones. Architectural units within each zone seem to have been oriented to an interrelated system of streets with a primary focus on the city gate at the center of the southern face of the tell.

Stratum IB: The Outer City (Field III SE [Field II], figs 1.11, 1.15–1.17; 2.3–2.4)

The fortifications, mainly to be seen along the slopes of the southeastern quadrant of the lower tell, included a double wall system, the upper wall on the crest of the slope and the lower wall at the bottom of the slope, as well as stables, a gatehouse, and a gate. The distance separating the two city walls varied from 50 to 35 m, depending upon the angle of the slope. Between the two walls and built up against the inner wall were several sections of stables extending along the slope for 85 m. Connected to the inner wall, in the southeast corner of the tell (Field II), were a series of inset/offset constructions. These may have been the foundation for a bastion similar in construction to the offset/inset double city wall of Lachish III as seen in a rendering based on Assyrian reliefs (Ussishkin 1982: 121–23). Connected to the lower wall was a 28 m × 11 m gatehouse that protected the city gateway.[7]

The city gate, of which only the east side has been excavated, is located at the center of the southern face of the tell. It consisted of a tower, three piers, two cells, and a roadway. Strata IB–C were clearly distinguished by the two superimposed roads which ran through the gateway. The upper road,

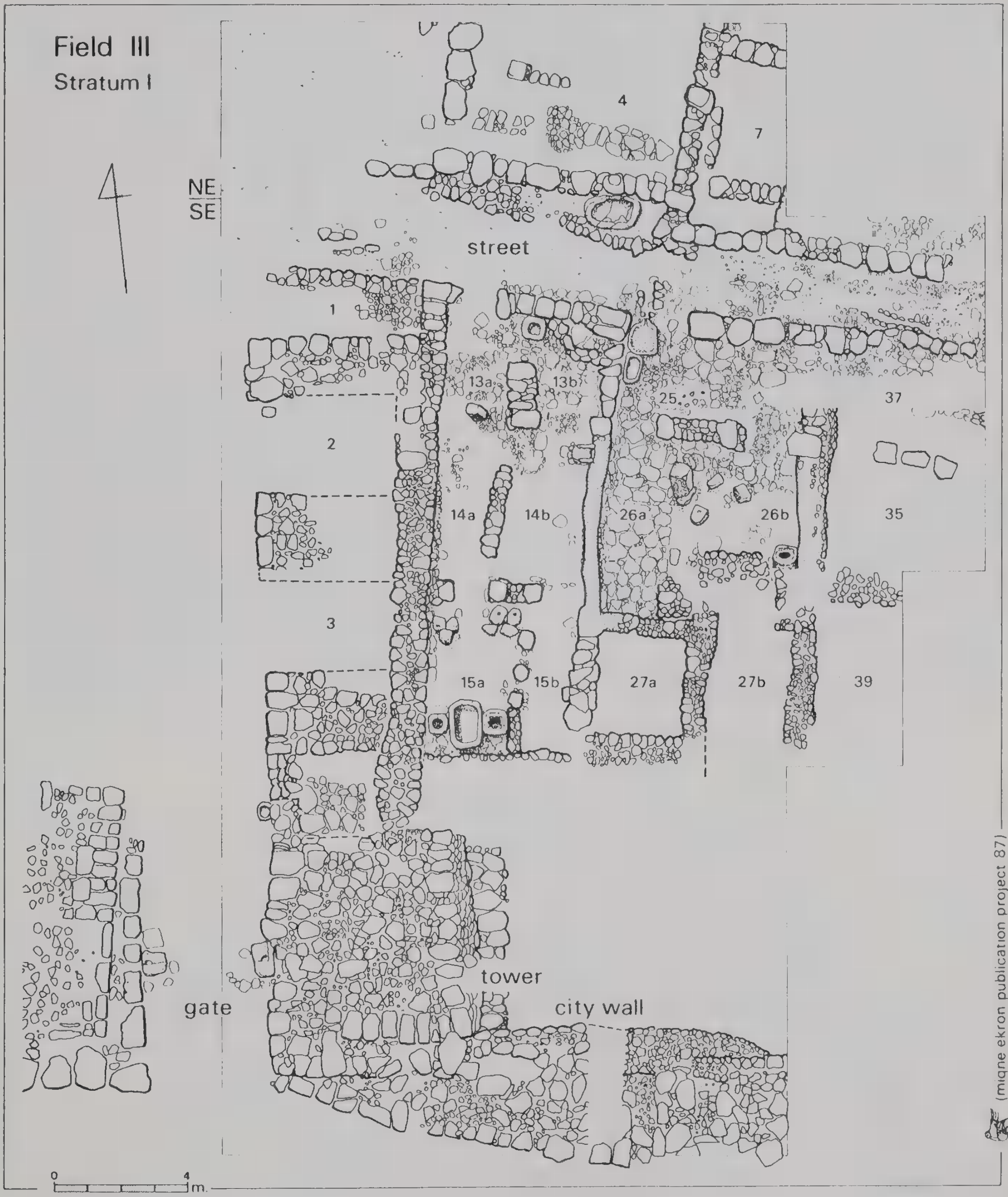


Fig. 2.3. Plan of Stratum IB fortifications, city wall, gate with tower, roadway with door sockets, cells 2, 3 and step, 1, down into plaza; olive oil industrial complex, Building 1—Rooms 15 (15a olive oil installation), 14 (14b niche with altar), 13 (13b two installations); Building 2—Rooms 27, 26 (26b olive oil installation), 25 (double installation with drainage canal); Building 3—Rooms 39, 38, 37. Street with large trough and sewer. Public buildings Rooms 4, 7. Note orientation of industrial buildings to street and public buildings to gate roadway. South-central face of tell, Field III SE/NE, facing north.

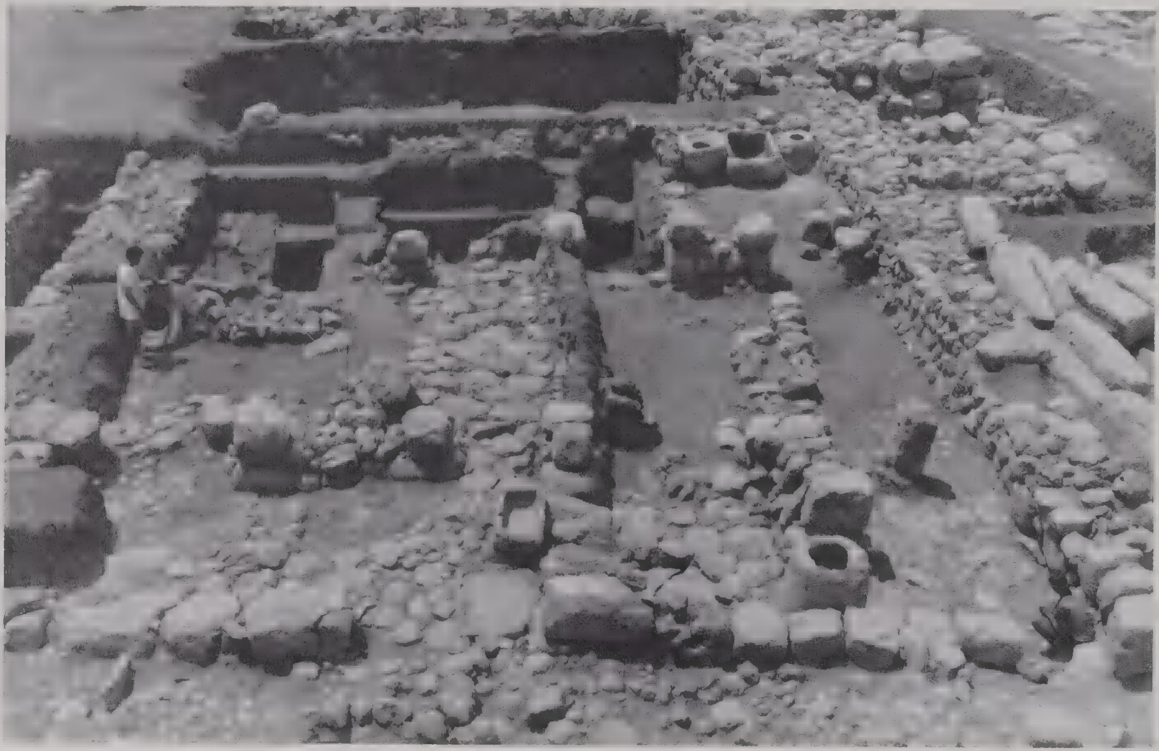


Fig. 2.4. Olive oil complex, southern industrial zone, Stratum IB: Building 1—Rooms 13, 14, and 15 on right; Building 2—Rooms 25, 26 (room 27 removed, below it mudbrick walls of Stratum IV) on left, city gate extreme right (note huge pillars lying on northern cell of gate, may have been part of gate construction), street in foreground. Field III SE, facing south.

part of which was composed of a heavily plastered pavement, had two door sockets that effectively narrowed the gate entrance in Stratum IB. The outer element of the gate, a large tower that the city wall abutted, was a rebuild of its Stratum IV predecessor. A staircase led up to the tower from the roadway, just past the gate entrance. In front of the staircase, a well-used stone vat was found in secondary use, probably an example of the "preliminary type" of olive oil press (see below). The northern gate pier was half the width of the other two and may not have supported a second floor as the other two piers most likely did. Lying near the northern pier, across the northern cell and second gate pier, were nine huge pillars that may have been part of the gate construction. Behind the northern pier was a step that led into a plaza, sloping downwards toward the center of the tell. The pier-cell plan of the gate has much in common with late Iron Age II Judean examples at Gezer (Dever 1971: 112–18) and Lachish (Ussishkin 1978: 55–59), as well as Philistine Ashdod (Dothan and Porath 1982: 54–55). While the fortifications including the area of the city gate contained no evidence of burning or destruction debris, the immediately adjacent buildings of the industrial zone, used for olive oil production, were sealed by an enormous destruction layer.

The industrial zone was located in an area immediately east of the city gate and parallel to the inner face of the upper city wall but separated from it by an open space. Extending northward, this zone had at least two major subdivisions bisected by a well-constructed east-west street that ran perpendicular to the city gate roadway. The street had a central drain, curbs on both sides to contain the heavy buildup of debris, and a large stone trough along its northern curb. Opening onto the street

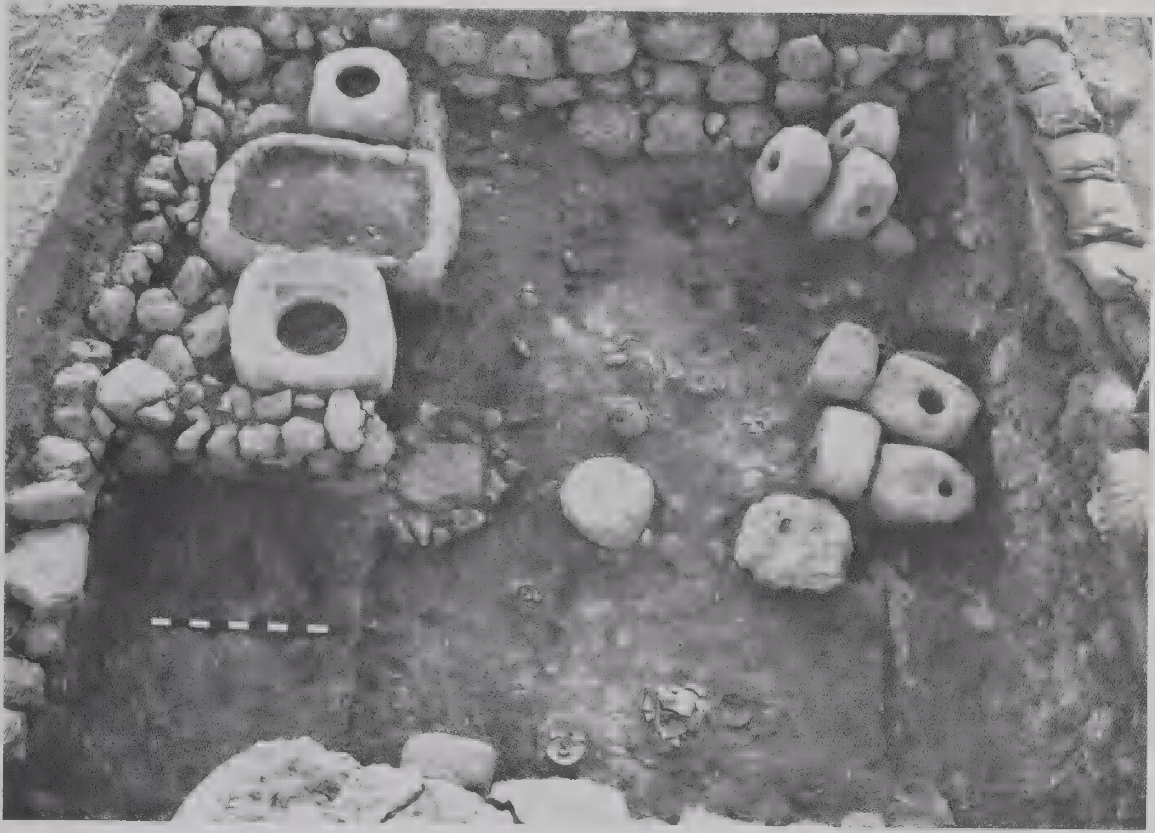


Fig. 2.5. Olive oil installation, southern industrial zone, Room 15 in Building 1, Stratum IB. Installation composed of basin, two presses (one round, one square), backing wall, stone perforated weights, dark patches embedded in the floor of Room 15a (above) are large fragments of wood beam; store jars sunk into floor of Room 15b (below). Field III SE, facing west.

from the southern subdivision of the industrial zone, two contiguous tripartite buildings and segments of a third building, all oriented on a north-south axis, have thus far been excavated. One building, 15 m long, consisted of two main rooms (14 and 15) and anterooms (13a and 13b). Adjacent to it was a second building, similar in length but somewhat wider. It had one main room (26) in the center of the building, smaller rooms (27a and 27b) to the south, and anteroom (25) to the north. The main rooms of both buildings also contained remains of architectural features that seem to have served as room dividers: benches in Room 14, pillar bases in Room 15 and different floor surfaces in Room 26. To the east, in a third building, were segments of Rooms 37, 38, and 39.

The focal point of the two fully excavated buildings was the olive oil installation room. In the first building, which was closest to the gate, the olive oil installation—the best example yet excavated—was located in Room 15a. This room also contained a large number of restorable pottery vessels (fig. 2.9) and small finds, including a bronze juglet, a cosmetic palette, and a Phoenician-type figurine. The oil installation was composed of two vat/presses, one on either side of a large rectangular crushing basin bordered on three sides by stone walls, and eight perforated stone weights. Large pieces of carbonized wood found lying in a line between one vat/press and its stone weights may have been remnants of a press-beam (fig. 2.5; Gitin 1985: 2–3).

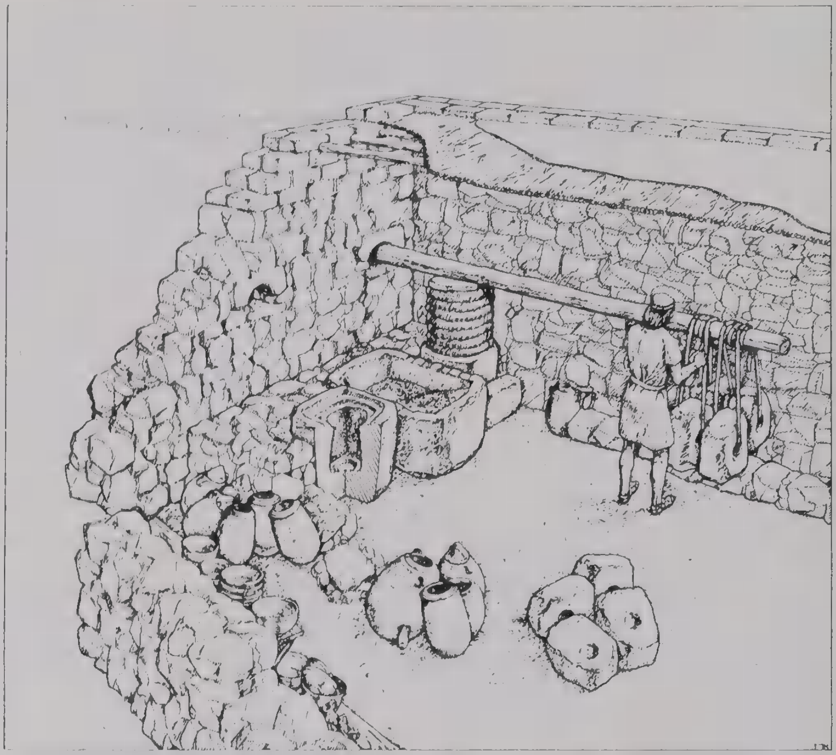


Fig. 2.6. Reconstruction of oil installation, southern industrial zone, Building 1, Room 15, Stratum IB. Field III SE, facing southwest.

The first step in the oil production process involved crushing the olives in the basin by means of a roller, producing the "first oil." The pulp was then put in straw baskets stacked on top of the press. A wooden beam, secured at one end in a niche in the wall behind the press and weighted at the other end with four stone weights, served as a lever for pressing the olive pulp. The two types of presses in Room 15a, the "preliminary" round type and the "Ekron" square type, represented two different stages of technological development (fig. 2.6). The latter, with a larger pressing surface and collection vat, was a more sophisticated unit that could hold 50–100 liters of liquid, considerably more than the 25 liters held by the simple or "preliminary" press (Eitam 1987: 72–74).

Room 14, separated from Room 15 by a stone double-pier room divider and a roof or second story support, produced an unusual find: a store jar sunk into the floor containing eight well-preserved iron agricultural tools (fig. 2.8). Room 14 also contained a unique stone niche with a four-horned altar (fig. 2.7). Of the 88 whole ceramic forms from Room 14, two may have been directly used in the olive oil separation process. One vessel, a huge jar/krater with 11 handles, had two circular holes about midway down from the top (fig. 2.8). If the juice produced in pressing the olive pulp was left standing in this jar/krater for a period of time, the oil would have risen to the top and the water would have settled near the bottom. The holes, when unplugged, would have allowed first the water and then the finished product, the olive oil, to be drained off into smaller vessels. A second vessel of the "Ekron" type store jar had one hole near its base (see similar "holed" jars in Room 25, referred to below).

To the north of Room 14 were Anterooms 13b and 13a, which led into the street. These rooms contained installations other than for oil production. A large, raised, flat stone platform was built into the northeast corner of Room 13b and a large circular stone vat was set between Rooms 13a and 13b.

In the second building, the olive oil installation, consisting of one press, four perforated stone weights, and a rear stone border wall, was in the center of the structure, in Room 26. The east-west

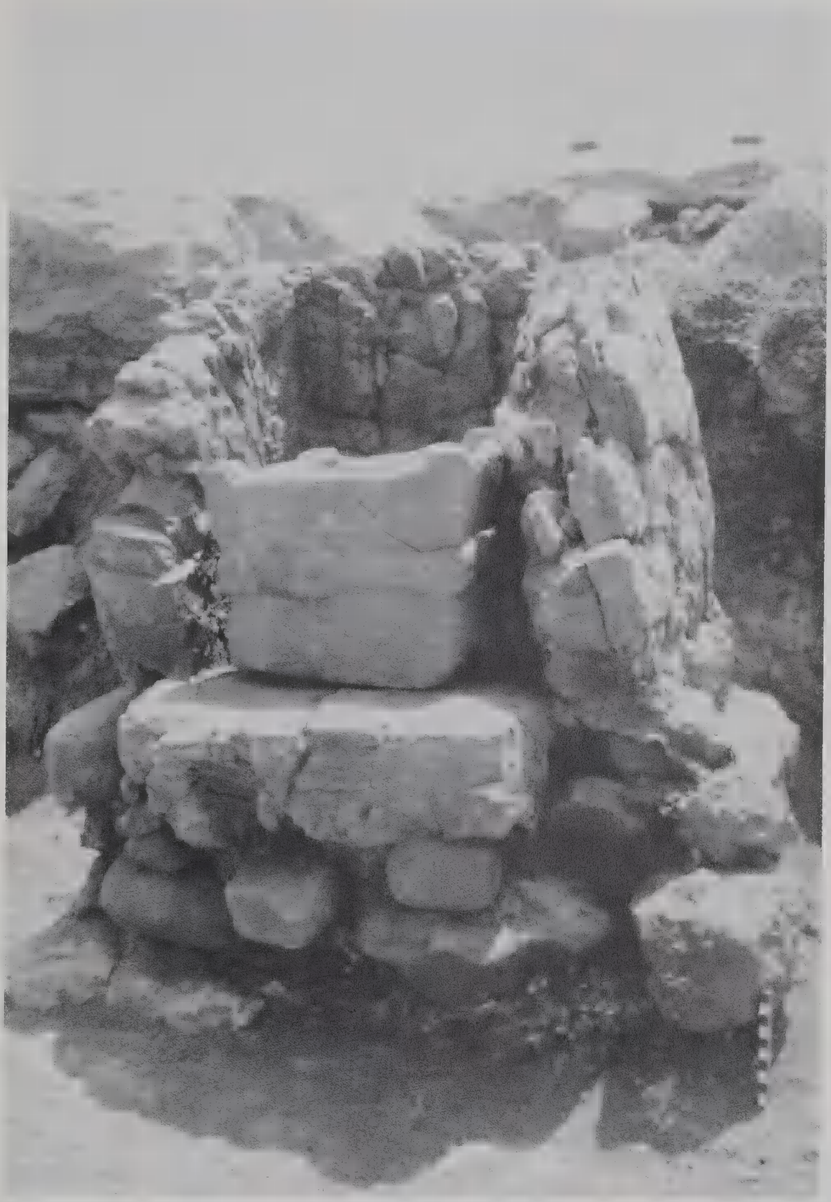


Fig. 2.7. Niche with four-horned altar, southern industrial zone, in Building 1, Room 14b, Stratum IB. Field III SE, facing east.

orientation of this installation was the same as that of the installation in Room 15a. Like the Room 15a installation, it originally also had a crushing basin and, perhaps, a second press with four perforated stone weights. This is indicated in part by the evidence of Stratum IC. Into this lower phase, in Room 26 next to the oil press, a huge pit was dug and filled with a large stone crushing basin, which was found intact. The pit was sealed by the stone border wall for the Stratum IB oil installation. Apparently, it was decided to reduce the size of the oil installation by withdrawing the crushing basin from use. Instead of moving or breaking it, the basin was buried in place. This intentional reduction in the size of an oil installation in Stratum IB, obviously resulting in a diminution of this installation's capacity to produce oil, represents a general phenomenon reflected in architectural modifications in the buildings in all the zones of occupation of Stratum IB. Note, for example, that two perforated stone weights from an olive oil installation, probably from Stratum IC, were reused as building stones in

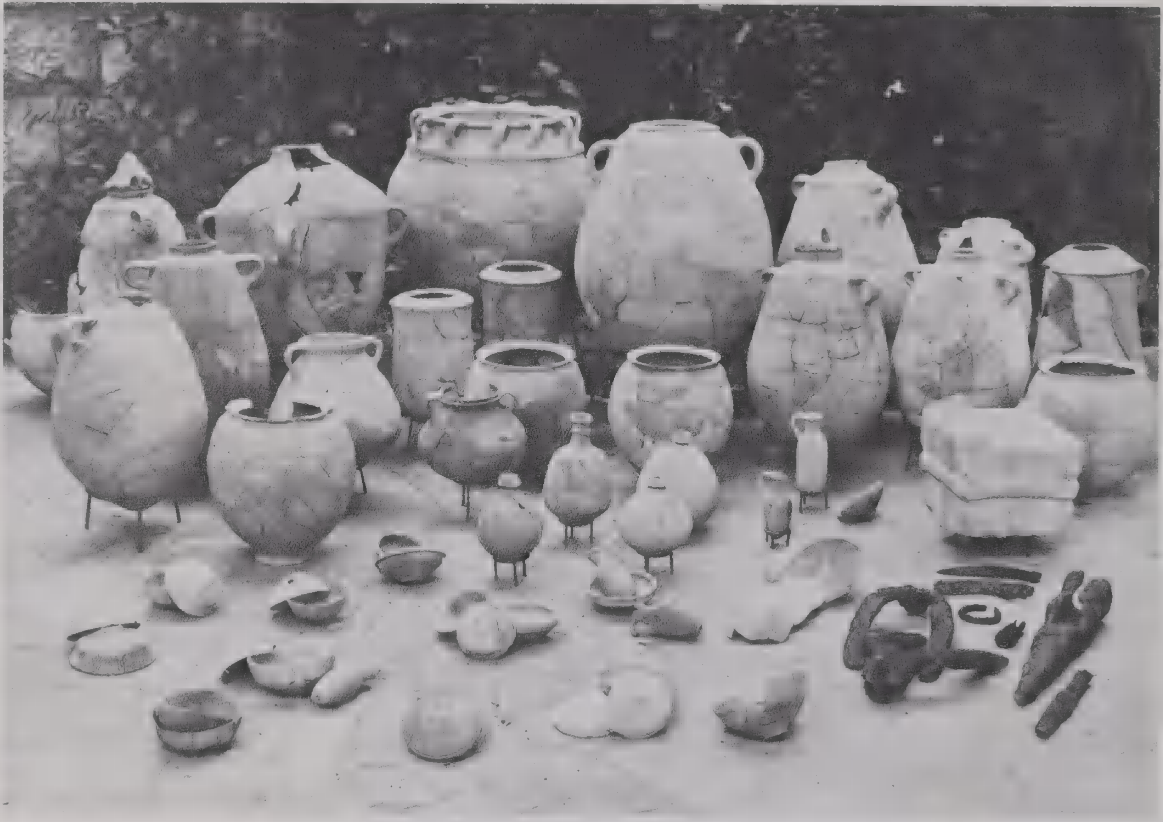


Fig. 2.8. Selection of artifact assemblage, southern industrial zone, Building 1, Room 14, Stratum IB: back row, left to right: store jar with lid, lmlk *type store jar, eleven-handled jar/krater for oil separation; large holemouth jar, four "Ekron" type store jars, sausage store jar; center: small ridged-rim holemouths, kraters, coastal cooking pots, balloon bottle, decanter, juglets and bowls; in right corner, four-horned altar and cache of eight iron agricultural tools. Field III SE.*

walls of Anterooms 13 and 25 in the southern industrial zone. Similar modifications were introduced elsewhere in Stratum IB in the northern industrial zone (see Field III NE, Room 12, and in the inner city Field IV NW, Rooms 9 and 25). The entrance of the city gate was narrowed in Stratum IB. The wider ramifications of this phenomenon are discussed below. Also in Room 26, north of the olive press, were two four-horned altars, one in an early stage of preparation (fig. 2.14). Two small, well-finished square stones that appeared in size and shape to have been candidates for altars were also found in this area, perhaps indicating the activity of an altar workshop. The altars in Rooms 26 and 14b, both in the northeast corners and next to the entrances of their respective rooms, were on the same east-west axis.

South of Room 26 were two smaller rooms, 27a and 27b. To the north, separated from the main room (26) by a double-pier construction similar to the one that separated Rooms 14 and 15 in Building 1, was Room 25 which also served as an anteroom opening out into the street. This anteroom contained a large number of loom weights, as well as an installation composed of an upper trough and a lower large flat stone basin with a spout and drain leading into the street. It is an exact parallel in form and location to one found in a seventh century B.C. building at Tel Batash-Timnah.[8]

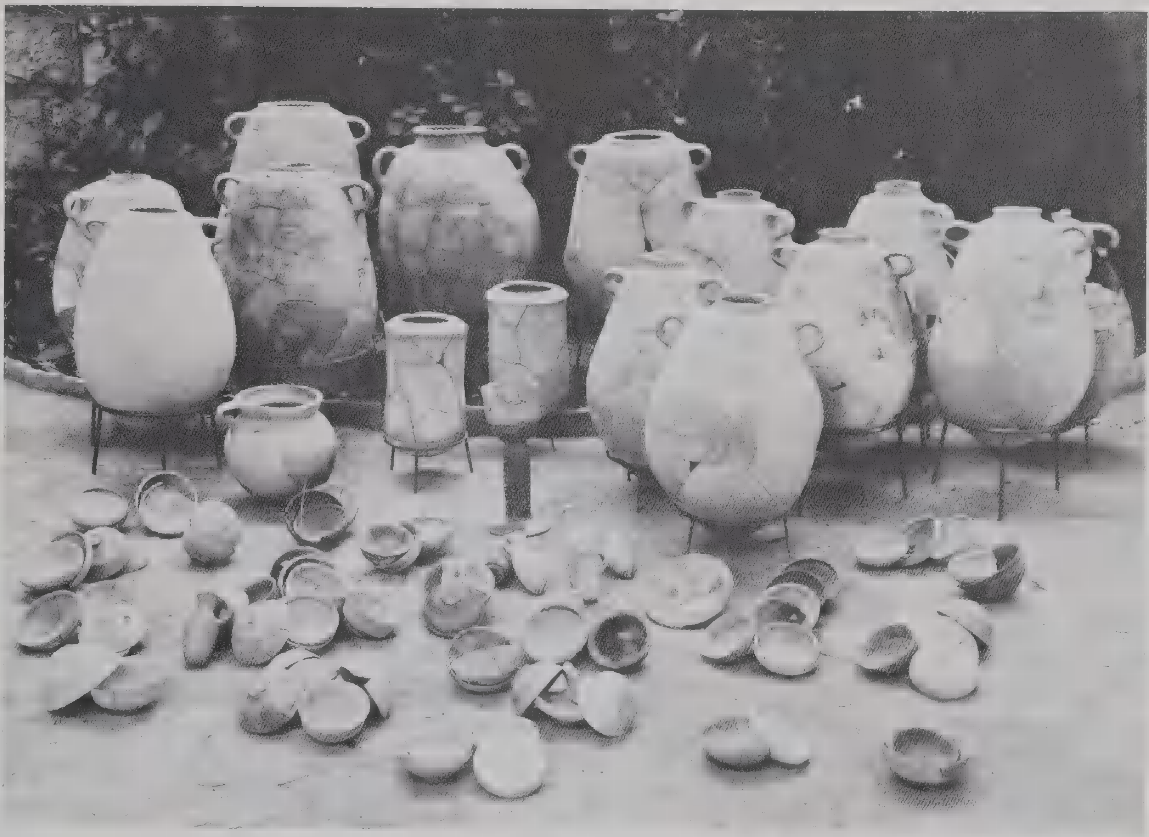


Fig. 2.9. Selection of pottery assemblage, southern industrial zone, Building 1, Room 15, Stratum IB. Back row, center: larger store jar/krater, three large holemouth store jars and the remainder "Ekron" type store jars; center: small ridged-rim holemouth jars, cooking jug, chalice, bowls and juglets. Field III SE.

Evidence for the northern subdivision of the industrial zone came from segments of three partially excavated rooms in Fields III NE and IV SE. The architectural "sandwiching" of these three rooms, between lower elements of Stratum IV of the eleventh/tenth century B.C. and upper sections of a large sixth century B.C. building of Stratum IA, offers the best example of the stratigraphic profile in the lower city. These three rooms, like those in Buildings 1 and 2 in the southern industrial zone, were covered by a massive layer of burnt destruction debris that sealed hundreds of seventh century B.C. restorable pottery forms, numerous loom weights, and many unique objects, such as a large copper clasp, a zoomorphic vessel, and other objects. The olive oil installation, composed of two presses, a crushing basin, and perforated stone weights, was aligned on a north-south axis and built up against a stone border wall in Room 12. The north wall of Room 12 contained a perforated stone weight in secondary use, probably taken from a Stratum IC olive oil installation. In the adjacent Room 64, two four-horned altars were found, one round and one square, similar in size and form to those from the other olive oil installation buildings. Most significantly, the upper surface of the square altar was heavily burned. This is the only example of an altar surface coated with ash. The outer entrance to the building in Room 64 seems to have opened onto an east-west street that may have extended as far west as the roadway which ran from the city gate into the inner city. This presents the possibility that the building plan in the lower city was laid out in a rectangular design with intersecting streets running perpendicular to each other. The oil installation building probably extended 6 m southward from Room 12, as evidenced by the pattern of burned destruction debris found in the probes below the rooms of the Stratum IA building. Beyond this point for another 9 m up to the southern street, the probes produced Stratum IB elements, with no evidence of destruction. This may indicate the absence of oil installations and another type of occupation zone that served to separate further the northern and southern industrial zones.

In Stratum IA there was no evidence of any kind of industrial activity in the large courtyard-type building constructed over the destruction debris of Stratum IB. To the north and east of this building, the Stratum IB destruction debris was left exposed in Stratum IA. Note also that the southern industrial zone, covered by a heavy destruction debris, and the fortifications and city gate of Stratum IB were also left exposed in Stratum IA. The only evidence of possible Stratum IA occupation in these areas is an ephemeral cobbled surface which ran over the foundation stones of the southern gate pier.

A preliminary analysis of the architectural plan and the 377 whole ceramic forms from the four main rooms of the two completely excavated buildings in the southern subdivision of the industrial zone provides a basis for determining the function of specific activity areas (figs. 2.8, 2.9, Tables 1–4).[9] Using the criteria of presence/absence and the distribution pattern of particular pottery types within the components of the architectural plan, significant conclusions can be drawn. First, the subdivisions of Rooms 14 and 15 in Building 1 and the subdivisions of Rooms 26 and 27 in Building 2 were designed for specific activities. In the western subdivisions, small ceramic forms (bowls and juglets) were in the majority. Within the destruction debris, the pattern of pottery find-spots indicates that bowls, found for the most part upside down and stacked between layers of mudbrick slabs, probably fell from upper wall shelves. These observations support the assumption that Rooms 15a and 27a, in which the floors were mostly free of store jars, were used as workspaces. In addition, Rooms 14a and 26a (the latter of which had a surface of large stone slabs) probably served as transit areas for moving from one main room to another. Rooms 15b, 14b, and 27b were definitely storage areas, because large ceramic forms (specifically store jars found mostly on or at floor level) represented the dominant pottery type. A second phenomenon also supports a storage function for these subdivisions: a large number of store jars were sunk into their floors (fig. 2.5). Because none of the jars had holes in their bases, they could not have been used for drainage, but most likely served as primitive food or commodity storage containers. Room subdivision 26b was definitely a work area, given its olive oil installation, even though it also had more store jars than bowls or juglets. However, Room 26, unlike the other rooms, contained a relatively small number of vessels.

Using the dominant type of two-handled ovoid store jar found at Ekron as a criterion (fig. 2.12:5), it can be assumed that Room 27 was clearly the main storage area in both buildings. This store jar type made up 29% of all vessels found in Room 27, while 18% of those found in Room 26, 16% in Room 14, and only 14% in Room 15 were of this type. While Room 27 was certainly the main store room, not one store jar lid was found there. Of the 38 conical ceramic store jar lids found in the southern industrial zone, 34 came from Room 15 (mostly from subdivision 15b) (fig. 2.10). This may indicate that Room 27b was used to store empty jars and that Room 15b was the place where they were filled.

The pattern of ceramic distribution also indicates a general affinity of function between the two main rooms with oil installations (Rooms 15 and 26) and the two without such installations (Rooms 14 and 27). The percentage of open ceramic forms (bowls, kraters, cooking pots, chalices, and votives) as opposed to closed forms (jars, jugs, juglets, bottles, and decanters) is significantly greater in Rooms 15 and 26 than in Rooms 14 and 27. In Room 15, open vessels comprised 44% of the ceramic assemblage and 23% in Room 26, while Room 27 had 8% and Room 14 had 7%. A second basis for

Table 1. Types of Pottery from Ekron, Industrial Building 1
Field III SE, Room 14

(based on a complete sample of whole forms)

	Coastal "Philistine"	Inland "Judean"	Assyrian or Assyrian Related	Southern (including Coastal/ Inland)	Northern	Total
Bowls	24 *	1 *		1 *		26
Kraters	13					13
Mortaria						
Cooking pots	1			1		2
Jugs				3		3
Amphorae						
Juglets-pointed base	13					13
long, round base		6				6
Bottle, balloon shape	3					3
Decanters		1				1
Storejars-ovoid	14					14
lmlk type		1				1
late lmlk type						
sausage					1	1
Holemouths-large, handles				1		1
small handleless				3		3
Jar/Kraters				1		1
Chalices						
Votives-juglets, bowls						
Total	68	9		10	1	88

*red-slipped and burnished 3

Table 2. Types of Pottery from Ekron, Industrial Building 1
Field III SE, Room 15

(based on a complete sample of whole forms)

	Coastal "Philistine"	Inland "Judean"	Assyrian or Assyrian Related	Southern (including Coastal/ Inland)	Northern	Total
Bowls	74 *			1 *		75
Kraters						
Mortaria						
Cooking pots						
Jugs				2		2
Amphorae						
Juglets-pointed base	4					4
long, round base		2				2
Bottle, balloon shape						
Decanters						
Storejars-ovoid	15					15
lmlk type						
late lmlk type						
sausage						
Holemouths-large, handles				3		3
small handleless				5		5
Jar/Kraters				1		1
Chalices	1					1
Votives-juglets, bowls						
Total	94	2		12		108

*red-slipped and burnished 6

Table 3. Types of Pottery from Ekron, Industrial Building 2
Field III SE, Room 27

(based on a complete sample of whole forms)

	Coastal "Philistine"	Inland "Judean"	Assyrian or Assyrian Related	Southern (including Coastal/ Inland)	Northern	Total
Bowls	64 *	2 *				66
Kraters	9					9
Mortaria						
Cooking pots	2					2
Jugs	1			3		4
Amphorae						
Juglets-pointed base	3				(1)	4
long, round base		3				3
Bottle, balloon shape	4					4
Decanters		2				2
Storejars-ovoid	41	1				42
lmlk type						
late lmlk type		2				2
sausage						
Holemouths-large, handles				3		3
small handleless				1		1
Jar/Kraters						
Chalices						
Votives-juglets, bowls						
Total	124	10		7	(1)	142

*red-slipped and burnished 3

(1) sherds only Cypro-Phoenician

Table 4. Types of Pottery from Ekron, Industrial Building 2
Field III SE, Room 26

(based on a complete sample of whole forms)

	Coastal "Philistine"	Inland "Judean"	Assyrian or Assyrian Related	Southern (including Coastal/ Inland)	Northern	Total
Bowls	18 *	2				20
Kraters	1					1
Mortaria						
Cooking pots		1				1
Jugs				2		2
Amphorae						
Juglets-pointed base	2					2
long, round base		1				1
Bottle, balloon shape	1					1
Decanters						
Storejars-ovoid	7					7
lmlk type						
late lmlk type						
sausage						
Holemouths-large, handles				1		1
small handleless						
Jar/Kraters				1		1
Chalices						
Votives-juglets, bowls				2		2
Total	29	4		6		39

*red-slipped and burnished 2

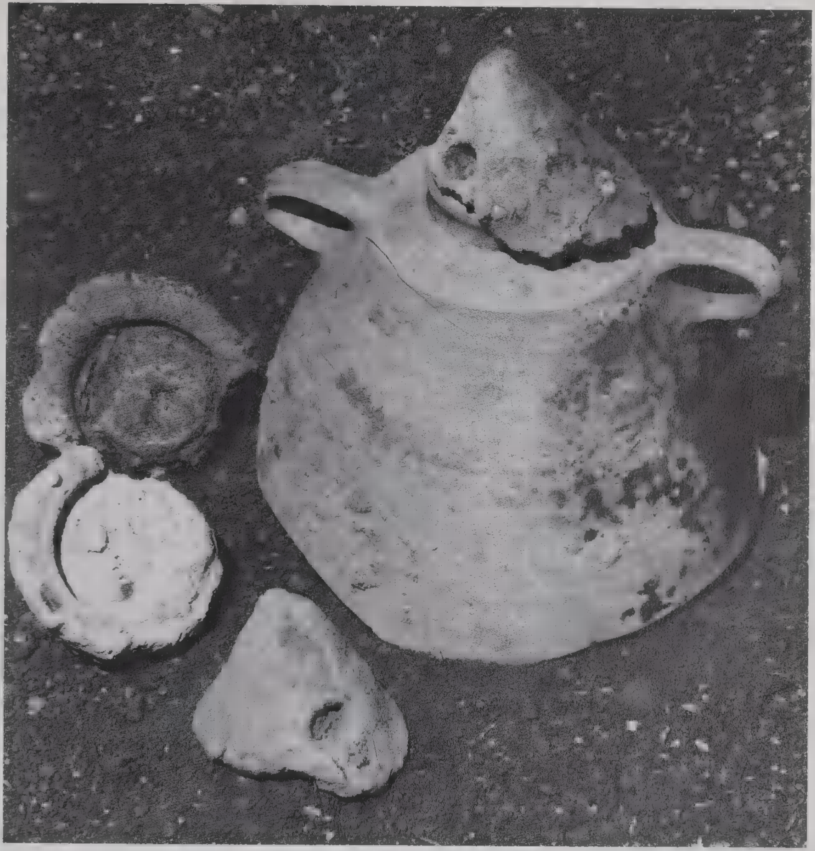


Fig. 2.10. Store jar, "Ekron" type with conical ceramic lids, southern industrial zone, Building 1, Room 15, Stratum IB. Field III SE.

comparison, perhaps more indicative of a specific functional affinity, is the percentage of food preparation vessels in these two room groups. The form types used in this consideration are cooking pots and kraters (the latter may be considered as a vessel for mixing foodstuffs). Both types were absent from Room 15, and Room 26 had only one example of each form, representing 5% of its total assemblage. On the other hand, Room 14 had two cooking pots and 13 kraters (17% of its ceramic assemblage) and Room 27 had two cooking pots and nine kraters (8% of its pottery group).

While the pottery restoration process has not yet been completed for the anterooms of the two completely excavated buildings in the southern industrial zone (Rooms 13 and 25) it is clear from their architectural plan and installations, as well as from preliminary observations of their ceramic and object contents, that they served multiple functions. Some of these functions were different from those of the main rooms of the industrial buildings. One similar function relating to the oil separation process is attested by the two "holed" jars in Room 25. One was a large eight-handled jar/krater with three holes near its base and the other an "Ekron"-type store jar with one hole near its shoulder. Five cooking pots (as many as were found in all the other rooms of both buildings) provide the most significant ceramic evidence for a different function. The possibility also exists that three of the cooking pots assigned to other rooms actually belonged to the anterooms.[10] For example, the one cooking pot excavated in Room 26a was found near the entrance to Room 25, and the two cooking pots excavated in Room 14 were found near the entrance to Room 13. The small finds of the anterooms included an extremely large number of loom weights, a two-shekel weight, a 26th Dynasty Egyptian scarab, two Scythian arrowheads, a Judean-type figurine, and a horned ivory pendant, among other objects. These data suggest two specific functions for these rooms—food preparation and the processing of textiles.

Stratum IB: The Inner City (Field IV SE/SW/NE/NW [Field V], figs. 1.11, 1.15)

The domestic district of Stratum IB was north of the northern subdivision of the industrial zone and attested by architectural elements of buildings, courtyards, and a roadway in the soundings of the southeast, southwest, and northeast quadrants in the center of the lower tell. The lower floor levels associated with these architectural elements can be assigned to Stratum IC. The contents of the building and courtyard were strongly suggestive of household or domestic activities. All of the architectural features were oriented on an east-west axis except for the roadway, which was in the direct line of the city gate. Of special interest is the four-horned altar found in the sounding of the southwest quadrant, which was somewhat larger than the four-horned altars in the industrial zone. A small round altar without horns also came from this quadrant (fig. 2.14). Like the city gate area, these soundings produced no evidence of the Stratum IB destruction so prevalent in the industrial zone.

The private building zone, a more exclusive area, was located in the northwest quadrant of the inner city. Here Strata IB–C were primarily differentiated by floor resurfacings and superimposed walls. Also, the large stone pillars and the three perforated olive oil installation stone weights in secondary use in the construction of Stratum IB walls probably came from Stratum IC. Stratum IA was only represented by the foundation stones of one room with a door socket and an associated cobble surface built over the Stratum IB plan. The architectural plan of Stratum IB contained seven rooms—segments of at least three buildings—following approximately what is known of the plan of Stratum IC, only enlarging it. The dominant or central room was rectangular in shape and had an entrance in the center of its east wall. Its walls were constructed of stone and mudbrick. This room produced a small four-horned altar (fig. 2.14) and a large number of jugs, one of which contained a cache of silver jewelry (fig. 2.13:14), as well as juglets and bowls. The room to the north contained a round-shaped, four-horned altar. The southern room, with a stone-lined threshold on its west face and walls primarily built of mudbrick, yielded a large number of cooking pots, jars, juglets, and bowls (fig. 2.11). The other three rooms to the east and north were only partially excavated. To the west and south of the two main rooms was a large L-shaped open public area enclosed on the west by a 12 m long mudbrick wall. To the west of this wall there was evidence of another room. While the floors of most of the seven rooms were covered with a huge destruction debris of fallen mudbricks, sealing hundreds of whole and restorable vessels as well as significant small finds (fig. 2.11), the L-shaped area produced no evidence of destruction debris.

Even though the pottery from Field IV NW has not yet been fully processed, some preliminary observations can be made. Of particular importance is the higher incidence of small closed forms in this zone as opposed to large open vessels, jars, and kraters, which are dominant in the other zones of the town plan. Also significant in this zone is the high percentage of decorated wares. Out of 207 pottery forms thus far distinguished, 26 (or 12½%) were decorated. In the industrial zone, in the two buildings with 377 whole forms, only 4% were decorated (Tables 1–4; fig. 2.13:1–2). Only in the private building district were fine wares, such as Assyrian-type and East Greek vessels, present (fig. 2.13:3, 6, 8). The architectural plan and the rich character of the finds of these rooms clearly indicate private dwellings of a somewhat exclusive nature.

Immediately to the north of Field IV NW, the Field V sounding on the Northwest Acropolis produced segments of a pillared room sealed by a heavy burned destruction debris with seventh century B.C. ceramic forms similar to the Stratum IB pottery assemblage in Field IV NW. Since this evidence was found at approximately the same absolute level as Stratum IB in the adjacent Field IV NW, it can be assigned tentatively to the Stratum IB private building zone.

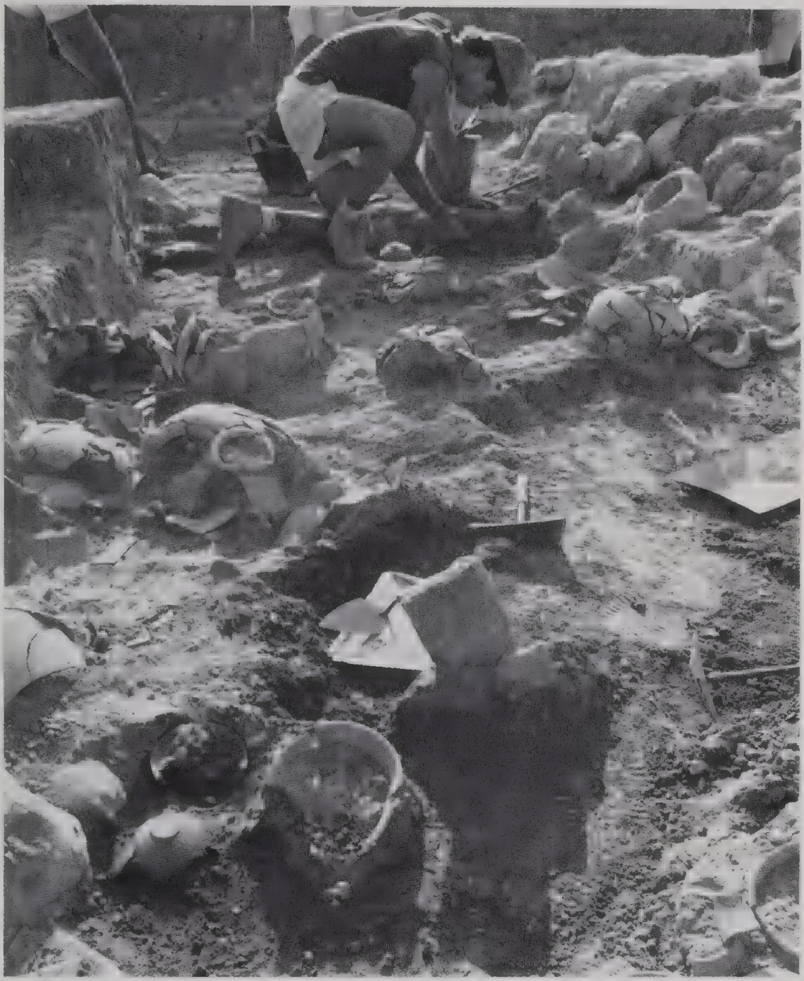
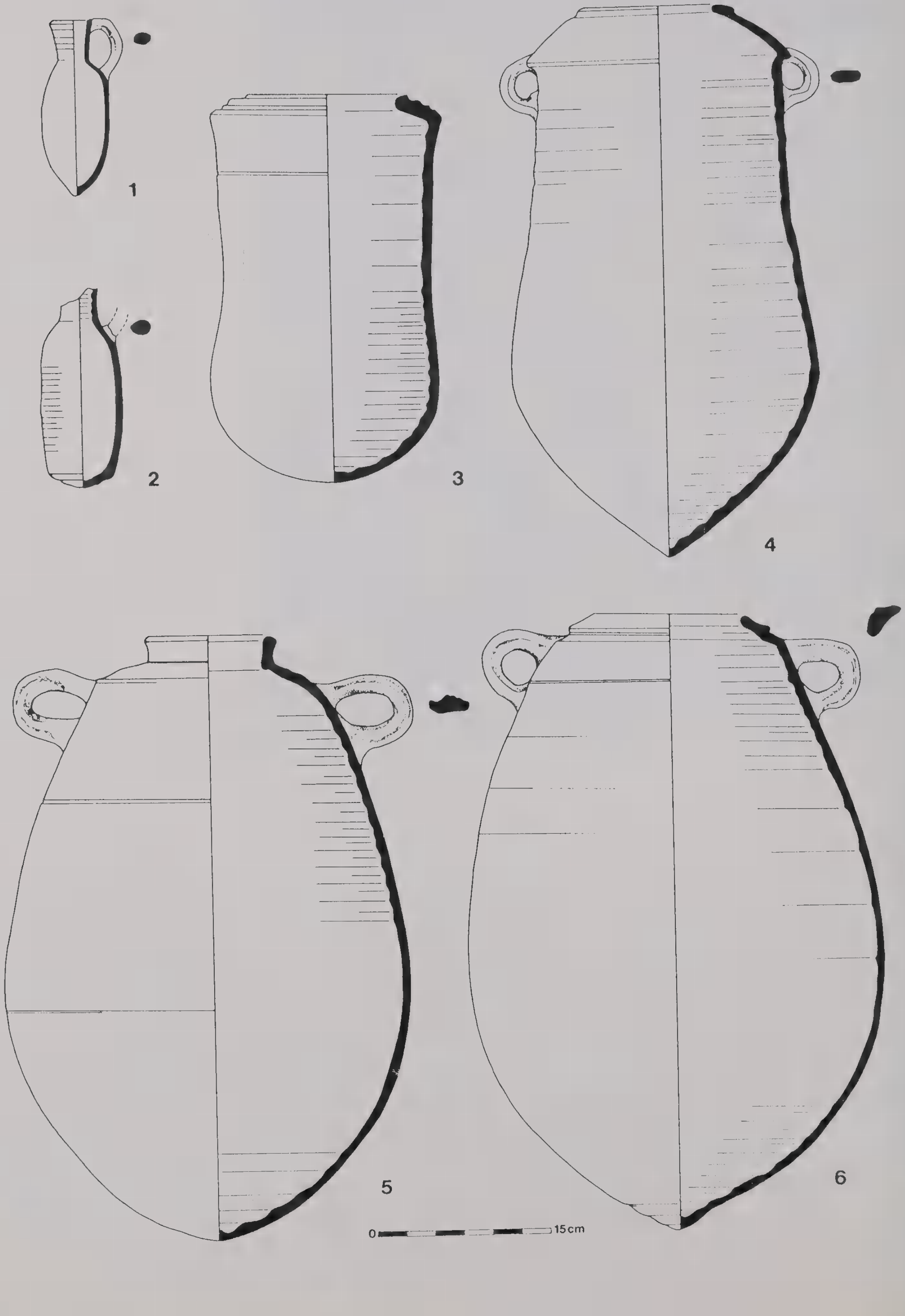


Fig. 2.11. Destruction debris of Stratum IB, in Room 8 of private building zone. Note large number of ceramic vessels in situ *on floor of Field IV NW, facing west.*

Conclusions: The Iron Age II City (figs. 1.10, 1.14–1.16; fig. 2.15)

Historical Context/Chronology

The Iron Age IIA–B, Strata III–II cities of Ekron, restricted to the Northeast Acropolis, were but one-fifth the size of the preceding Iron Age I city. This dramatic transition is best understood in light of geopolitical factors reflected in the decline of Philistine power and the emergence of the influence of the United Monarchy in the second quarter of the tenth century B.C. (Oded 1979: 236). Beginning with this period, Ekron changed hands several times. It was first under the control of Egypt, and for a short time in the ninth century B.C. under the authority of Aram-Damascus (Aharoni 1979: 307, 325, 342). By the mid-eighth century B.C., with Uzziah's campaign to the Coastal Plain, Philistia seems once again to have been under Judean control (Aharoni 1979: 345). Soon afterwards, a weakened Judah allowed the Philistines to overcome the cities of the Negev and the Shephelah of Judah (2 Chr 28:18). This moment of independence was short lived and soon interrupted by the Assyrian invasions (Aharoni 1979: 377). Throughout the Iron Age IIA–B period Ekron functioned mostly as a semi-independent state, serving as a border outpost for Egypt or Assyria, or existing as an ethnic enclave within the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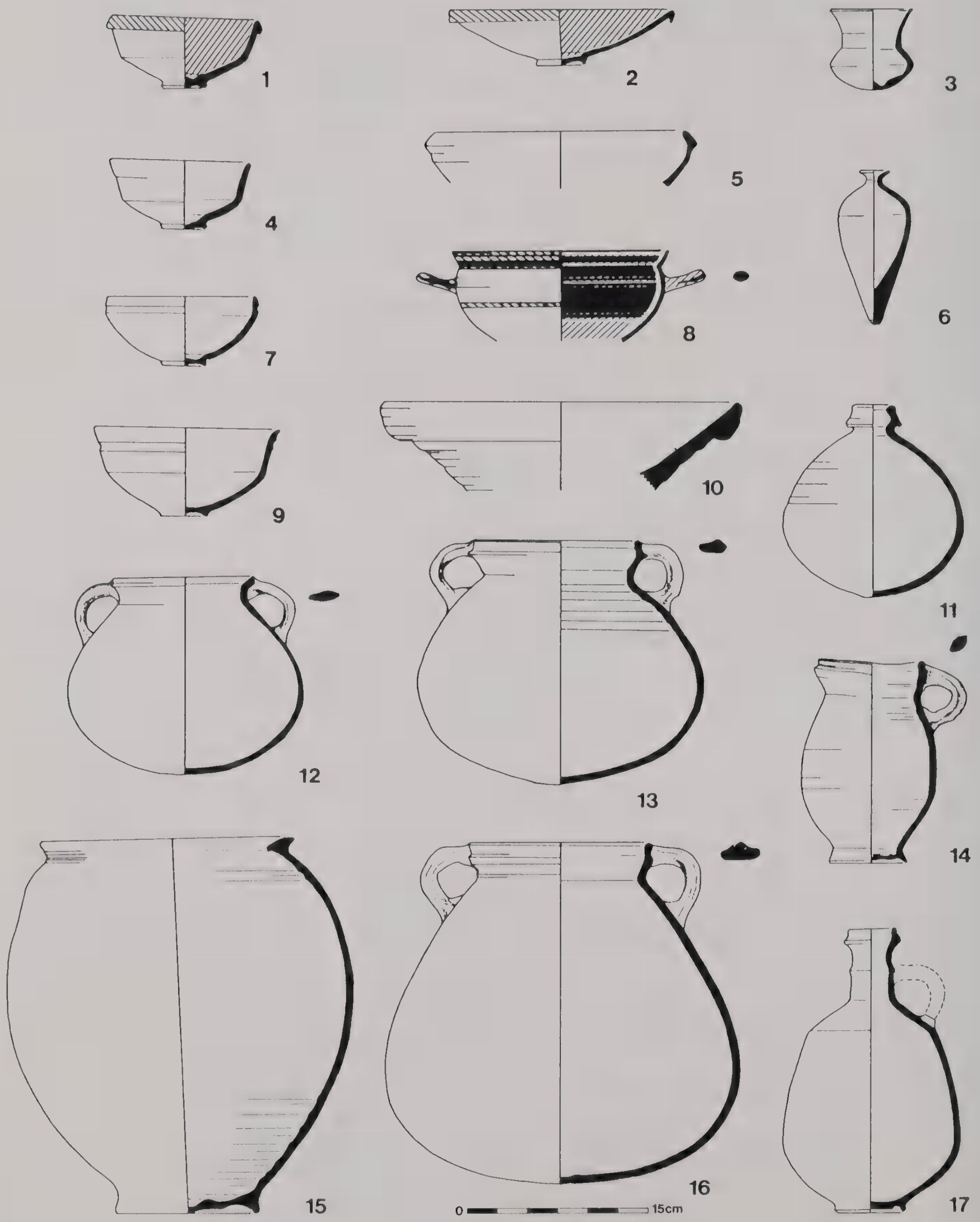
sphere of influence of one of the inland states. As it changed roles, it became a prize pawn in the power game between Judah, Egypt, and Assyria. Whatever its role, Ekron in the Iron Age IIA–B period never regained the status of a major political and economic Philistine capital city that it had held in the Iron Age I period. This development demonstrates the general weakness of its hinterland, Philistia, and the fluidity of the frontier zone of the Inner Coastal Plain in the Iron Age IIA–B period.[11]

That Ekron continued to exist throughout this period as a Philistine entity (though under greatly reduced circumstances) can be inferred from biblical texts, for example, the "Ba^cal-zebub, the god of Ekron" passage (2 Kgs 1:2–3), and the prophetic admonition, "I will turn my hand against Ekron, and the remnant of the Philistines shall perish" (Amos 1:8). Apparently, in the ninth century and as late as the mid-eighth century B.C. Ekron was still regarded by Israel as Philistine and prominent enough for its god to be consulted and its city to be inveighed against. The Assyrians also regarded the area of the Coastal Plain as belonging to the Philistines, indicated by the use of the word *Pi-lis-te* in the Assyrian documents of the period (Pritchard 1969: 287; Tadmor 1966: 88–89, 94). Little more than this and what has already been discussed above can be said about the Iron Age IIA–B city at Ekron until the current excavations produce additional data from this period. What is certain, however, is that the archaeological evidence for Ekron Strata III–II is consonant with the textual evidence and the dating of these strata to the tenth to eighth centuries B.C.[12]

The transition to the Iron IIC Strata IB–C cities was precipitated by historical events for which there are important written sources. The process began with a change in the political status of Ekron Stratum IIA in the last quarter of the eighth century B.C. The Neo-Assyrian kings, after campaigning in Israel, initiated a series of military ventures in Philistia to gain control of the coastal routes in preparation for their assault on Egypt (Pritchard 1969: 282). The combined results of the campaigns of Tiglath-pileser III in 734 B.C., Sargon II in 712 B.C., and Sennacherib in 701 B.C. brought all of Philistia, as well as Judah, securely under the hegemony of Assyria (Eph^cal 1979a: 276–79). Beginning with Sennacherib, Ekron was restored to its status as a city-state, controlling more than its own immediate environs. Sennacherib took the towns of Hezekiah, King of Judah, and gave them to (among others) Padi, King of Ekron (Pritchard 1969: 288). By the second quarter of the seventh century B.C., the cities of the littoral (as well as Ekron) and the other Assyrian vassal city-states of Philistia achieved a high level of prosperity. This enabled Esarhaddon, King of Assyria, to call upon the twelve kings of the sea coast (including his vassals Sil-Bel, King of Gaza; Mitinti, King of Ashkelon; Ikausu, King of Ekron; and Ahimilki, King of Ashdod) to provide building materials and their transport for construction of his palace in Nineveh (Pritchard 1969: 291). His successor son, Ashurbanipal, during his first campaign against Egypt in 667 B.C., also called upon the vassal kings of the Philistine cities to support his campaigns against Egypt and Ethiopia. Included among them was Ikausu, King of Ekron (Pritchard 1969: 294).

Fig. 2.12. Selection of pottery, southern industrial zone, Stratum IB, Field III SE.

No.	Room	Region	Form
1	15	coastal	pointed-based juglet
2	15	inland	elongated, round-based juglet
3	14	southern	ridged-rim holemouth jar
4	14	northern coastal	sausage jar
5	15	coastal	"Ekron" ovoid store jar
6	15	southern	holemouth jar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The vassal lists of the Assyrian kings are most instructive. They show Assyrian control over twenty-two major city-states, including the kingdoms of Phoenicia, Judah, Edom, Moab, Philistia, Ammon, and the island of Cyprus. The twelve cities of the seashore mentioned in this list are near the critical line of march from Assyria to Egypt. The city-state of Ekron was a geographic focus in this line of march, halfway between Arvad of Phoenicia in the north and the cities of the Egyptian Delta in the south (Oded 1979: 245). Ekron probably served as a logistical support base for the Assyrian war effort (Eph^{c}al 1983: 101–2). More importantly, Ekron was at a central point on the east-west geographic axis separating the Assyrian-controlled hinterland of Judah, Edom, Moab, and Ammon to the east from the Assyrian-controlled port cities of the Coastal Plain to the west (Eph^{c}al 1979a: 287–88). These factors were vital to the development of the Strata IB–C cities of Ekron.

Assyrian sources shed no light on the end of Assyrian rule in Philistia, which most likely occurred around 630 B.C. (Tadmor 1966: 86–87). However, from other sources a picture emerges which indicates that at this time Philistia once again came under the Egyptian sphere of influence (Porten 1981: 48; Malamat 1979: 205).[13] This change of ruling powers in Philistia marks the end of the *Pax Assyriaca* in the Eastern Mediterranean basin. At Ekron it coincides with the stratigraphic transition from Stratum IC to Stratum IB, partially indicated by the diminution in olive oil production as evidenced by the dismantling of segments of the Stratum IC oil installations at the beginning of Stratum IB. Soon a new superpower conflict developed and the old enemies, Egypt and Assyria, combined forces to challenge the growing might of Babylonia (Malamat 1979: 205–7). It is within this context that the Saqqarah papyrus (or Adon letter) was written, foreshadowing the end of the Philistine city-states and the end of Ekron. Sent to the Egyptian Pharaoh by his loyal vassal Adon, the king of one of the Philistine city-states, the letter requested a force to rescue the king from the Babylonians, who had already reached Aphek. Recently, this Philistine city has been identified as Ekron, the closest Philistine site to Aphek, based on the reading of the document's newly discovered demotic address (Porten 1981: 41–45). While this reading is still somewhat controversial, at the very least the document provides the background for the last days of Philistia at the end of the seventh

Fig. 2.13. Selection of pottery, Stratum IB, Fields III SE/IV NW.

No.	Room	Region	Form
1	15	coastal?	red-slipped bowl
2	15	southern?	red-slipped bowl
3	8	Assyrian-type	goblet (wheel burnish)
4	15	coastal	carinated bowl
5	15	Judean	folded-rim (half-moon) bowl
6	8	Assyrian-type	bottle
7	14	coastal	ridged-rim bowl
8	9	East Greek	decorated skyphos
9	15	coastal	ridged-rim bowl
10	gate cell 2	coastal/inland	mortarium
11	14	coastal	balloon bottle
12	26	Judean	cooking pot
13	14	coastal	cooking pot
14	9	coastal	jug
15	14	coastal	krater
16	14	coastal	cooking pot
17	14	Judean	decanter

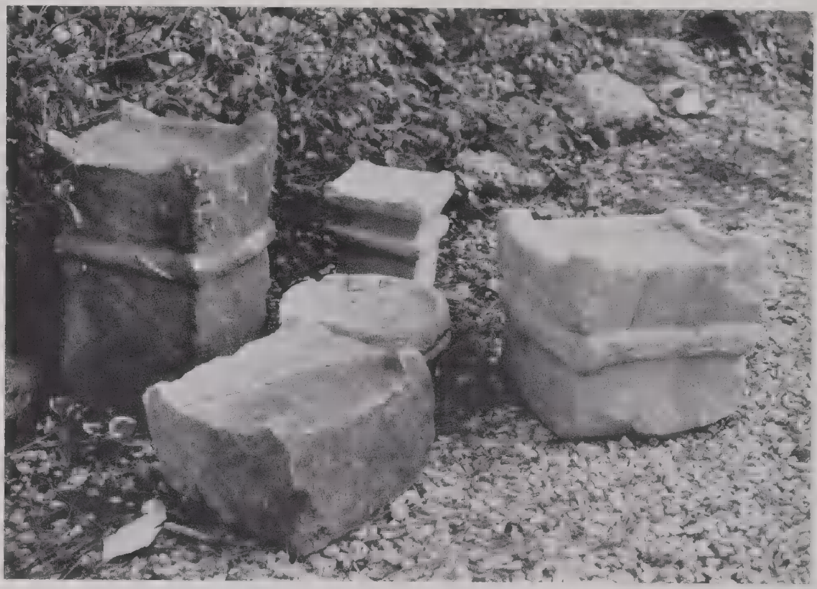

Fig. 2.14. Selection of Stratum IB altars (5 of 12). Center, round altar (domestic zone, Field IV SW.8), four-horned altars left and front (southern industrial zone, Field III SE.26), right (southern industrial zone, Field III SE.14), back (private building zone, Field IV NW.9).

century B.C. Biblical texts also reflect the shaky political status of the Philistine city-states in this period with their prophetic foreboding of what was to come: "to make them a desolation and a waste, a hissing and a curse, . . . in all the foreign folk among them; all the kings of the land of Uz and all the kings of the land of the Philistines (Ashkelon, Gaza, Ekron, and the remnant of Ashdod)" (Jer 25:18, 20); "for Gaza shall be deserted and Ashkelon shall become a desolation; Ashdod's people shall be driven out at noon, and Ekron shall be uprooted" (Zeph 2:4). Apparently these admonitions reflect the historical reality evidenced in the Babylonian chronicles that describe a 603 B.C. campaign by Nebuchadnezzar, King of Babylon, against a city in Philistia, which some scholars suggest may have been Ekron (Porten 1981: 49; Malamat 1979: 209).

Thus, the chronology of the Strata IB–C cities of Ekron can be structured according to the historical documents of this period. Stratum IC belonged to the Assyrian period, approximately 700 to 630 B.C. Stratum IB belonged to the final period of semi-independent status under the influence of Egypt, 630–603 B.C. The 603 B.C. destruction of Stratum IB can be ascribed to the Babylonian conquest of Philistia. On the basis of the ceramic evidence, the unfortified settlement of Stratum IA in the partially abandoned lower tell was built soon after the destruction of Stratum IB and existed for only a short period of time.

The ceramic evidence alone, even without the absolute dates provided by documents, is sufficient to assign Strata IB–C to the seventh century B.C. Many of the ceramic types of Strata IB–C clearly have antecedents that appear as early as the late eighth century B.C. (for example, the ridge-rimmed holemouth jar [fig. 2.12:3], the everted-rim krater [fig. 2.13:15], and the single-ridged small bowls [figs. 2.13:7, 9] among others). Their floruit, as well as that of the entire ceramic assemblage of Strata IB–C, was the seventh century B.C.[14] As for Stratum IB, it produced ceramic types that first appear at the end of the second half of the seventh and the beginning of the sixth century B.C., clearly supporting the 603 B.C. destruction date of Stratum IB. Five examples will suffice to illustrate this point. (1) The globular-shaped, metallic ware cooking pot with an everted, slightly-grooved rim (fig. 2.13:12), while appearing sporadically at coastal sites, is the dominant inland type of the south (Judah), with parallels at Meṣad Ḥashavyahu, En-Gedi V, Lachish II, Aroᶜer II, and Batash II (Naveh 1962: 103, fig. 5:1–3; Mazar, Dothan, and Dunayevsky 1966: 23, fig. 8:14, 15; Aharoni 1975: pl. 47:19, 20; Biran and Cohen

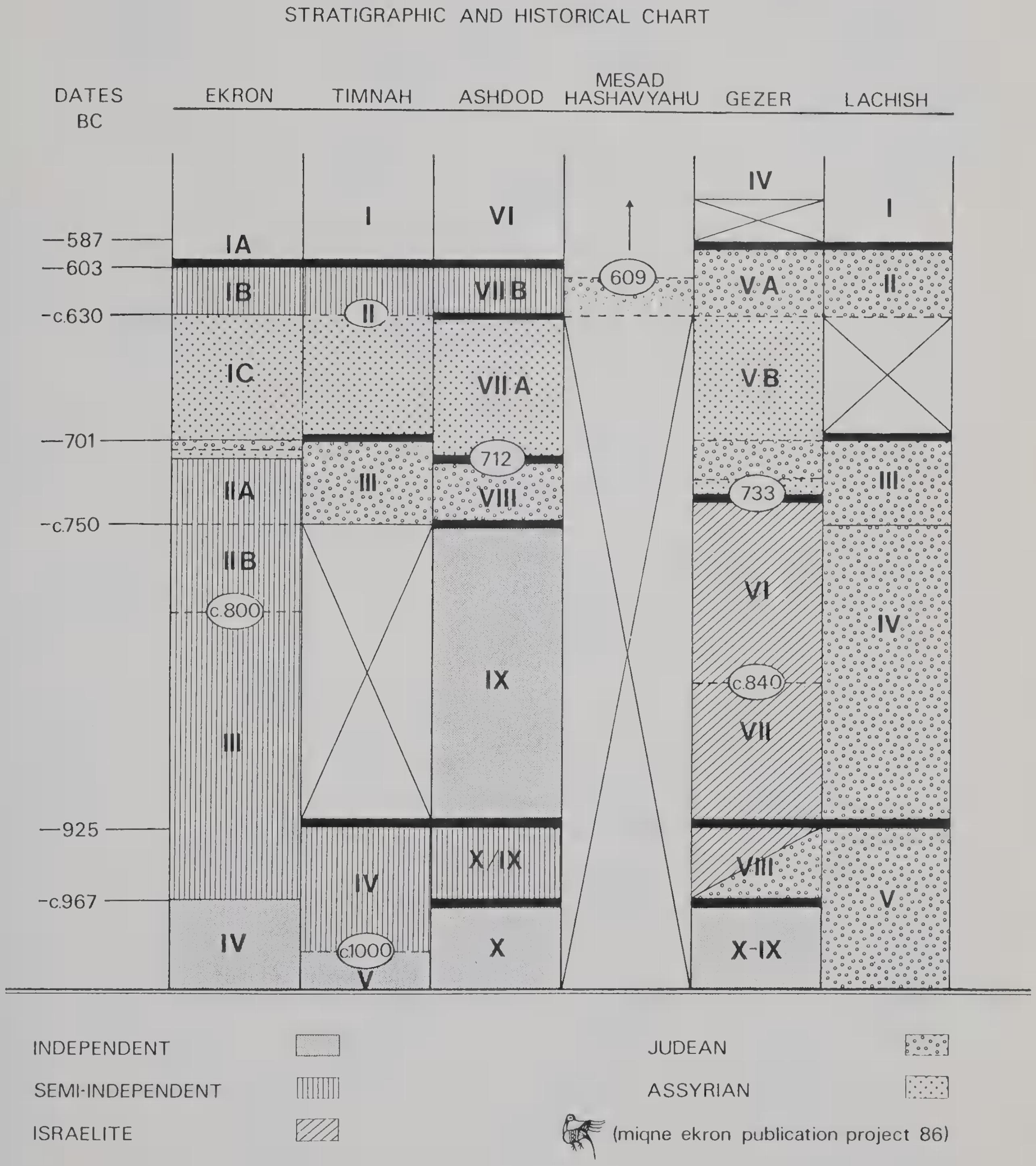

Fig. 2.15. Stratigraphic and Historical Chart.

1981: 255, fig. 6:2; Kelm and Mazar 1985: 112, fig. 17:2). (2) The sack-shaped, sometimes elongated cooking pot with a vertical-ridged rim (fig. 2.13:13, 16) is primarily a coastal type, with parallels at Meṣad Ḥashavyahu, Ashdod VI–VII, and Batash II (Naveh 1962: 103, fig. 5:4; Dothan 1971: fig. 121, 55:1; 1982: fig. 20:6; Kelm and Mazar 1985: 112, fig. 17.1). (3) The balloon bottle (fig. 2.13:11), perhaps a derivative of a seventh century B.C. Assyrian form (Lamon and Shipton 1939: pl. 9:16), is unique to southern coastal plain sites, with parallels at Ashdod VII and Batash II (Dothan and Porath 1982: 143, fig. 21:11; Kelm and Mazar 1985: 115, fig. 19:4). (4) The mortarium (fig. 2.13:10) with a folded rim, ridged body, and flat base, found throughout the country, is dominant at coastal sites, with parallels at Meṣad Ḥashavyahu, En-Gedi V, Ashdod VII, Keisan 4, Aroᶜer II, and Batash II (Naveh 1962: 101, fig. 4:16–17; Mazar, Dothan, and Dunayevsky 1966: 65, fig. 16:2; Dothan 1971: 111, fig. 50:1; 129, fig. 59:11–12; Briend and Humbert 1980: pls. 28:1, 31:5–6; Biran and Cohen 1981: 255, fig. 6:1; Kelm and Mazar 1985: 110, fig. 16:7). (5) The East Greek Skyphos (fig. 2.13:8) is mostly found at coastal sites, with parallels at Meṣad Ḥashavyahu (Naveh 1962: 107, fig. 7:1–8, 11–12).[15]

The ceramic assemblage of Stratum IA produced not only forms similar to and typologically developed from the main body of material of Stratum I, but also many new forms and ware groups absent from Stratum IB. The most prominent of these new forms was the small, severely cyma-shaped, pointed-base sausage store jar in an orange ware. Thus, the final phase of settlement in the Iron Age IIC period, Stratum IA, may have been an "afterlife" of short duration extending into the sixth century B.C.

Historical Context/Economic Growth

The olive oil industry was the dominant feature and the chief stimulus for the phenomenal physical and economic growth of the Strata IB–C cities. The results of a thorough surface survey of the tell and the immediately adjacent areas in two seasons during 1985 and all the seasons of excavation have shown that there were 111 agricultural/industrial installations at Ekron. These were found in three areas: 76 along the tell crest (including those excavated in the northern and southern industrial zones in Field III), 18 on the slopes of the tell (some not *in situ*), and 17 in a ten-acre area off the north slope of the tell. Of these, 102 are oil installations, 8 are wine presses, and 1 installation may be associated with the manufacturing of textiles. Of the 102 oil installations, 88 were of the more technologically advanced "Ekron" type. Even with only a little more than 2% of the site excavated, it is now clear that the industrial zones took up at least 20% of the Strata IB–C cities. The production capacity of the oil installations identified to date in these zones has been estimated at 1,000 tons or 1.1 million liters in a good harvest year. This would have required 48,000 store jars taking up 4,000 square meters of storage area (Eitam and Shomroni 1987: 48–49). This is the largest olive oil production center to be found the ancient Near East (Eitam 1987: 72–74).[16] It was probably established and reached its zenith in Stratum IC, as a direct result of the stability produced by the peace enforced on Philistia and Judah by Assyria in the first two-thirds of the seventh century B.C. (Ephᶜal 1979a: 286–87). In effect, the formation of a new and enlarged political and economic unit created the favorable conditions for the development of a highly centralized industry. This new geopolitical factor introduced by the presence and commercial policies of Assyria was the motor that powered the regeneration of the urban process at Ekron. This may, in effect, be offered as an example of the achievement of the long-standing Assyrian goal of urbanization of its territories: the increase of agricultural production, provision of new income for administrative purposes, and the securing of trade routes (Oppenheim 1964: 118).

Ekron apparently was chosen as the site for an olive oil production center because it met the necessary requirements. The following six features or conditions unique to Ekron may have influenced the selection process. (1) Geography: Ekron's natural border location and proximity to the main communication arteries afforded easy access to the hill country, where most probably the olives were grown, and to inland and coastal cities, where the finished product, oil, was marketed. From the coastal cities oil could be shipped to Egypt, Cyprus, and Phoenicia. (2) Topography: Of prime importance was the type of land available for building such a production center. Only Ekron, of all potential sites, had a large enough suitable area (the unoccupied lower tell) close to it (the upper tell) so that already settled living space and/or valuable farming and pasture land would not have to be appropriated. (3) Availability of local workers: The eighth century B.C. city on the upper tell at Ekron was most likely not destroyed in the Assyrian campaign of 701 B.C.; in other words, its labor force was left intact and so, most probably, were its buildings and means of food production (Na^{c}aman 1974: 35; Eph^{c}al 1979a: 286–88). Note that Sennacherib's annals specifically state that he only conquered and carried off the spoils of those officials, politicians, and common people of Ekron who had rebelled against him (Pritchard 1969: 288). Other sites in the area, like Gezer and Lachish, were left in ruins by the Assyrians, and their populations either greatly reduced or forced to move. Gezer was only partially rebuilt in the transition at the end of the eighth/beginning of the seventh century B.C. (Gitin 1988), and at Lachish there was a gap in occupation until the rebuild in Stratum II (Ussishkin 1983: 133). (4) Source of surplus labor: With massive Assyrian deportations from Israel in the north at the end of the eighth century B.C. (Eph^{c}al 1979b: 188–89), it was quite possible that the Assyrians preferred to send some Israelite captives to a Philistine city like Ekron rather than to a former Israelite city like Gezer. There is some evidence to support at least the presence of Israelite crafts-people at Ekron. Eleven of the twelve altars found at Ekron were four-horned and typologically related to the northern style of altars from the previous period (fig. 2:14; May 1935: 8, pl. XII) These are neither found in Judah nor in Philistia except at Ekron, and they may have been produced at Ekron by northern Israelite craftsmen. (5) Availability of a food supply to feed an increased population: Using conservative demographic figures, it can be estimated that the 50-acre mound of Ekron, plus the ten-acre off-the-slope settlement, had a population of ca. 6,250 during the period of Stratum I (Broshi and Gophna 1984: 42).[17] This is an enormous number of people. By comparison, Gezer (the closest site to Ekron) during its most concentrated period of occupation (MBII–LB) had a population of about half this size.[18] Ekron is on the edge of the rich alluvial plain, the "Imperial Valley of Israel," and had the potential for raising the food required for such a large population. This must have also been true during the Iron Age I period when the city was almost as large as it was in Strata IB–C. (6) Security of investment: Another reason why the Assyrians might have chosen a Philistine city as opposed to a former Judean or Israelite city, is the fact that Ekron's royal family may have had a stronger bond of loyalty to the Assyrian king. Padi, the first king of Stratum I, was put on the throne by Sennacherib (Pritchard 1969: 298), and it may be assumed that the authority of his successor, Ikausu, also came directly from Esharhaddon and Ashurbanipal (Pritchard 1969: 291, 294). On the other hand, it was a sometimes rebellious Hebrew dynastic king, Manasseh, who ruled Judah as a vassal of the Assyrian king (Pritchard 1969: 291, 294; Reviv 1979: 200; 2 Chr 33:11–13). Perhaps the huge amount of capital required to build this industrial center was more easily raised for investment in a Philistine city that had a special relationship with the Assyrian king (Perčirková 1987: 169). In this respect, it is also important to note the long-term Assyrian commercial interests in Philistia (Tadmor 1966: 88; Perčirková 1987: 165–68).

Ekron continued to produce olive oil on a large scale in Stratum IB. Following the transition from Assyrian to Egyptian hegemony in Philistia (as the excavation data indicate), there was some diminution in olive oil production. No doubt the essential conditions for Ekron's selection as an oil production center in Stratum IC pertained to its continuation in Stratum IB, albeit in a different political and economic setting.

A second economic activity, which may have originated or been expanded during the Assyrian period of Stratum IC, can be deduced from the large number of loom weights, as well as from some of the non-oil production installations in the industrial zone of Stratum IB. This evidence strongly points to some kind of textile manufacturing. Support for a second industrial activity is also based on the fact that the oil installations at Ekron were idle for at least six to ten months of the year between the olive harvests. Therefore, the efficient use of the buildings and equipment in the industrial zone would imply the presence of another industry during this period (Eitam 1987: 74; Cadogan 1987: 84). This assumption may necessitate a reevaluation of Albright's original understanding of the presses as dye-vats (Albright 1943: 55–62). The importance of textiles for Philistia is supported by the list of Assyrian tribute taken from Philistine cities, which features linen suits, robes, robes of byssus, and tent cloth (Tadmor 1966: 92–93).

A clue to the nature of organizational control of Ekron in Stratum IB may be found in the four-horned altars. It is clear that the size, plan, and industrial base of the Strata IB–C cities were dependent on a strong central authority. Obviously, such an authority must have also maintained careful control over the city and especially over its most valuable asset, the oil industry. The four-horned altars from the excavated industrial buildings, as well as a large four-horned altar (not freestanding) found on the surface in the southeast corner of the tell near another large oil installation were most likely used for burning incense. It is not impossible that the burning of incense is evidence of the presence and control of the priestly organization and, through it, governmental supervision of the production of oil.[19]

Interrelationships—Coastal Plain and Inland Judah

The very presence of the oil industry at Ekron is a strong indication that there must have been a long-term economic interrelationship between the Coastal Plain and Inland Judah during the seventh century B.C. Without a relationship of this sort, it would have made no sense to establish this industry at Ekron and expect it to flourish as it obviously did. In addition to the oil industry, the excavations produced direct evidence to support this assumption. Three examples will suffice to illustrate this point.

Stone was the major construction material in the Stratum I, Iron Age IIC city. This was true of the fortifications and other zones of occupation, including the industrial zone, in which all the oil installations were also made of stone. Some mudbrick construction was evident, but mostly in internal walls, wall shelving, and roof tiles. In the Iron Age I period, mudbrick was the dominant construction material. The nearest major source of limestone is in the low hills of the Shephelah of Judah, just across the border from Ekron (Karmon 1971: 8–9, 245). It may be argued that mudbrick was used in the Iron Age I period because it was the building material immediately available in quantity and the technique of using it in construction was part of the established Coastal cultural tradition. For much of these periods, Ekron and the Shephelah sites were in conflict, and stone for constructing fortifications might not have been sold to an enemy Philistine city, nor might the construction technique and building know-how involved, so well established in the Judean Inland, have been readily accessible to Ekron. Also, it can be argued that only in the period of Strata IB–C, in the seventh century B.C., when there was long-term peaceful interaction between Ekron and its Judean neighbors, could stone and its construction technology, together with stonecutters and building experts, have been brought from the Inland to Ekron on such a large scale.[20]

The ceramic evidence, while only in a preliminary stage of processing and evaluation, also offers a basis for considering interregional relationships, or at the very least, interregional contact.[21] The best ceramic sample with which to begin to investigate this subject is the assemblage of 377 whole forms from the southern industrial zone (Tables 1–4). A breakdown by regional types produced the following percentages: Coastal 83.5%; Judean 7%; Southern 9%; and Northern less than 0.5%. For examples of each of the regional categories, see figs. 2.12 and 2.13. Apparently, while there were Judean ceramic forms in the industrial zone, they do not indicate a strong Judean presence. In the inner city, however, there was an increase in the concentration of Judean forms. All the diagnostic Judean rim forms indicating separate vessels throughout the four zones of occupation and the whole forms from the southern industrial zone were counted. As a result, 164 separate Judean-type vessels were distinguished. Of these, 69 (42%) were from the outer city (fortifications, city wall, gate, and industrial zones) and 95 (58%) were from the inner city (domestic and private zones). Thus, the living quarters of the inner city have a higher concentration of Judean ceramic forms. This is a tentative conclusion that needs to be tested through more extensive sampling before a definite pattern can be established and its implications understood.

Inscribed stone weights also indicate economic contact between coastal and inland areas. Three examples were found: one in the southern industrial zone (a two-*shekel* weight) and two in the private building zone (a five-*shekel* and a *bekah* weight). All of the weights were dome-shaped and flat-based, characteristic of Judean types (Kelm and Mazar 1985: 117).

Final Comments

Ekron was a constantly changing city during the Iron Age. It evolved through a four-stage process of growth, contraction, regeneration, and partial abandonment, reflecting divergent influences on and functions of a border city and its frontier zone. The present research has tried to show that while geopolitics played a paramount role in determining the dimensions, character, and activities of this city, environmental and economic factors were also critical stimuli in shaping it and its relationships with neighboring cities and nation-states. Research will continue for many years, retesting the assumptions and conclusions discussed above. Two of those subjects (for which there is yet only minimal evidence) will become primary areas of concentration, as they are central to all aspects of research at Ekron in the Iron Age. These are the definitions of Philistine ethnicity[22] and the mutual effect of Coastal Philistine and Inland Judean cultures.[23]

While there is much yet to learn about the development of Ekron as an urban border site and as a type-site for the subregion of the Inner Coastal Plain, what is already known has made an impact on our understanding of the history of the Iron Age II period both in the Coastal Plain and in Judah. At the very least we have increased our knowledge of urban development, town planning,[24] material culture, and industry of seventh century B.C. Philistia.

Notes

[1] Aharoni's pioneering work in the late 1950s, investigating the settlement of the Israelite tribes in the Upper Galilee, helped to initiate the regional approach in archaeological research in Israel. By the 1970s, Aharoni had vastly expanded his concept of regional archaeology, and with the help of his colleagues and students from Tel Aviv University, opened up new vistas of regional research in the Northern Negev. Today, most local and foreign institutes of archaeology in Israel are committed to regional archaeological goals. One result has been a greatly enlarged sample of material culture from southern Israel, including data from Arad, Aroᶜer, Ashkelon, Batash, Haror, Ira, Lachish, Masos, Miqne, Qitmit, Sera, Uza, and other sites.

[2] While the evidence for constructing subregions of material culture now exists, most of the data has not yet been published. However, based on preliminary reports and the author's personal evaluation of unpublished data, vertical and horizontal divisions or subregions can be established for southern Israel. There are at least five such vertical divisions west of the Jordan River that parallel the general topographic zones of the country: the Coastal Plain, Inner Coastal Plain, Shephelah, Hill Country, and Judean Desert. Within these zones, horizontal divisions can be made at the Wadis Gerar, Shiqma, and Besor/Beersheba. While most of these areas share common elements of material culture, each region demonstrates a peculiar affinity for specific groups of material

culture, specifically pottery forms. Nuances in ceramic assemblages within well-defined geographic subregions offer the basis for formulating local patterns of ceramic development and interregional contact. For ceramic examples from three of these subregions, see figs. 2.12 and 2.13.

[3] On most of the 1:250,000 and 1:100,000 maps printed by the Survey of Israel, Tel Miqne is incorrectly cited as point 96, about 1½ km northwest of the actual site. On the 1:100,000 map, sheet 10, of the Survey of Israel, revised in 1980, point 96 is again marked in English as the site of Tel Miqne, but the correct placement of the site is noted in Hebrew. On the 1:50,000 map of the Survey of Israel, printed in 1978, the correct location is cited, with an outline of the tell.

[4] Albright's identification was influenced by three factors: (1) He had already identified Qatra as Ekron (Albright 1923: 5). Thus, when he came to Muqanna^c, he was looking for a site to fit the historical and geographical description of Eltekeh. (2) While he recognized that Muqanna^c was a large site, estimating that it was a quarter of a mile long, he did not comprehend its full dimensions. He did not recognize that the large lower tell area of 40 acres and a second mound, which he correctly identified as the later village of the Byzantine and Islamic periods on the Northwest Acropolis, were an integral part of the site. Primarily, what he identified as Eltekeh is what is now known as the Northeast Acropolis of Ekron or the upper city which has the appearance of a khirbeh. Fitting his identification of the site as a ruin (khirbeh) was its slight depth of debris, noted in his report. He did not know, however, as we know today, that at least one-third of the height of the tell was masked by heavy alluvial sediment from the downflow of the Naḥal Soreq. The *terminus ante quem* of this accumulation in the Byzantine period is based on its latest ceramic evidence. In addition, he did not have the evidence before him from the current excavations for the extensive Iron Age fortifications (Albright 1975: 509, n. 3). (3) Failure to find any evidence of Late Bronze occupation strengthened his belief that the site was Eltekeh, which is only mentioned in texts from the first half of the first millennium B.C. Twenty-eight years later, the researchers of the Circle of Historical Geography reaffirmed Albright's identification with Eltekeh, based on a similar set of factors (Kallai-Kleinmann 1951: 50–51; 1952: 62–64).

[5] By 1953, while Albright's identification of Muqanna with Eltekeh was still accepted, his identification of Qatra as Ekron was coming into question. In that year Mazar suggested that Tel Batash should be identified as Ekron because of historical and geographic factors (Maisler [Mazar] 1953: 171–72). However, in 1957 Naveh made a thorough survey of Khirbet al-Muqanna^c for the Department of Antiquities, the results of which he immediately published in two articles (Naveh 1957: 178–98; 1958: 87–100; 165–70).

His analysis of the architectural, ceramic, biblical, extra-biblical, and topographical evidence brought him to the conclusion that Muqanna^c should be identified as Ekron. Of particular importance in making this judgment was his mapping of the huge 40 acre lower section of the tell, the existence of which was first brought to his attention by Natan Aidlin, a member of Kibbutz Revadim.

In 1958, the identification of Ekron was reinvestigated by Kallai in his work on the town lists of Judah, Simeon, Benjamin, and Dan. Influenced by Mazar, a shift was made. Tel Batash was identified with Timnah and Khirbet al-Muqanna^c based his new identifications partially on his reinterpretation of the northwest boundary line of Judah and the then recent research at Muqanna^c by Naveh (Kallai-Kleinmann 1958: 145–46). Naveh's survey in 1957 for the Department of Antiquities formed the basis of the site's identification with Ekron. However, it was Natan Aidlin, a member of Kibbutz Revadim, who first brought the fact that the site had a hugh lower section of 40 acres to the attention of the Department of Antiquities (Naveh 1958: 91).

[6] Other sponsoring institutions include: Boston College, Brown University, the Lehigh Valley Center for Jewish Studies (Allentown College of St. Francis de Sales, Cedar Crest College, Lafayette College, Lehigh University, Moravian College, Muhlenberg College), Southeastern Baptist Theological Seminary, and the University of Lethbridge. Additional support came from Aurora University, Baltimore Hebrew University, Harvard Semitic Museum, and the Israel Oil Industry Museum. The project is affiliated with the American Schools of Oriental Research and the Israel Exploration Society. Logistical facilities, equipment, and international student travel grants have been funded by the Dorot Foundation. The fellowship program for local students is supported by Eugene and Emily Grant and Estanne Abraham. The publications program has been funded by Philip and Muriel Berman and S. H. and Helen R. Scheuer Family Foundation. Staff support comes from the Herman and Rosa L. Cohen Fund. The other Friends of Miqne whose on-going support has helped to make the Miqne-Ekron Project a reality are: Bernard Bell, Arnold and Amalia Flegenheimer, Artemis Joukowsky, Martha Sharp Joukowsky, Joy Ungerleider Mayerson, Danile and Joanne Rose, Richard J. Scheuer, and Daniel and Marion Wolk. Funding for the 1984 season came in part from a grant from the National Geographic Society. In 1984 the Keren Kayemet L'Israel was responsible for the construction of the 5½ km access road to the tell. The project is also deeply indebted to Kibbutz Revadim for its active assistance and to Natan Aidlin, the liaison with Kibbutz Revadim, for his encouragement and enthusiastic support which continue to be so vital to the success of the project. In addition to the preliminary publications listed in the bibliography and the planned Final Report Series, four field reports for the 1981, 1982, and 1984 seasons have appeared in the project's limited edition Field Report Monograph Series. Field Reports for the 1985 and 1986 season are partially in press. The Director of the Volunteer Program and Consortium Relations is Ernest Frerichs, Professor at Brown University. Permanent core staff members are: Field Archaeologists Ann Killebrew, graduate student at Hebrew University; Yosi Garfinkel, graduate student at Hebrew University; and Barry Gittlen, Professor at Baltimore Hebrew University. Coordinator of Environmental Research Program is Geomorphologist, Arlene Rosen. Other staff includes: Anthropologists Brian Hesse, Associate Professor at the University of Alabama and Paula Wapnish, Research Collaborator at the Smithsonian

Institution; Oil Industry Consultants, David Eitam, Curator of the Israel Oil Industry Museum and Natan Aidlin of Kibbutz Revadim; Architects, Erez Cohen and David Hully; Photographers, Doug Guthrie and Ilan Sztulman; Pottery Registrar Elaine Gittlen; Archaeometrist Avriel Genesen-Yarus; and Conservators Dina Castely and Anthony Read.

[7] The main elements of the Iron II fortifications system, including the city gate, were identified by Naveh during his 1957 survey (Naveh 1958: 91–95).

[8] Observation made by the author during a visit to the excavations at Tel Batash in the summer of 1986, and confirmed by the excavators, Kelm and Mazar.

[9] All the ceramic evidence from the excavations in Field III has been saved and is presently being counted, weighed, and restored. While the complete and already restored vessels from this area offer a sound statistical sample for the preliminary analysis of room function, only when the results from the counting and weighing procedure have been obtained will a final analysis be possible. This information is being processed using the computer at the Hebrew University and will be presented in a forthcoming article on the corpus of seventh century B.C. pottery from Ekron. Note that even at this preliminary stage of analysis, when the rooms of the industrial zone have been assigned specific functions, their multipurpose use is also recognized. For an excellent treatment of this subject, see Stager 1985: 17.

[10] Also note that Room 27 had a high incidence of food preparation vessels. While it was primarily a storage area, as discussed above, it may have had a secondary function similar to Anterooms 13 and 25 (it too served as a kind of anteroom), opening onto the large unroofed area that separated the industrial buildings from the city wall.

[11] It is important to note that whenever Ekron (on the Coastal Plain [Philistine] side of the border zone) was weak, Gezer (on the Shephelah [Judean] side of the frontier zone of the Inner Coastal Plain) was strong. Thus, both sides are in effect type-sites by which to measure the relative strength or weakness of its side of the border in any given period.

[12] Further evidence for a presence in the area of Ekron during the ninth to eighth centuries B.C. may be seen in the redated Revadim seal (Sass 1983: 175).

[13] Some scholars have posited that following the retreat of Assyrian power, Judah under Josiah controlled part of the Coastal Plain. While a Judean corridor may have extended through the Naḥal Soreq, including Tel Batash-Timnah and reaching the coast at Meṣad Ḥashavyahu (Kelm and Mazar 1985: 117–18; Malamat 1975: 125), the evidence from the excavations at Miqne does not indicate Judean control of Ekron during any part of the seventh century B.C.

[14] A complete report on the corpus of seventh century B.C. pottery from Ekron is presently being prepared. Parallels for the ceramic types from Rooms 14 and 15 (figs. 2.8, 2.9) and from the rest of the Stratum IB city (figs. 2.12, 2.13), supporting the seventh century B.C. date, can be found at Tel Bastah-Timnah (Kelm and Mazar 1985: 109, fig. 15; 110, fig. 16; 112–13, figs. 17–18; 115, fig. 19) and at Ashdod Strata VII–VI (Dothan 1971: 111–13, fig. 50–51; 89, fig. 39; 197–201, figs. 93–95; Dothan and Porath 1982: 139–49, figs. 19–24; 153–57, figs. 26–28). Note that examples of *lmlk*-type store jars (Tufnell's Type 484) in a late seventh century B.C. context should not be considered unusual (Kelm and Mazar 1985: 114). Restored *lmlk*-type jars, without stamped handles, thus far have come from the southern industrial zone (Building 1), one from Room 14, and two from Room 13.

[15] For a detailed treatment of the parallels of this form and its dating, see the forthcoming article Magness 1988.

[16] For a discussion of the chiseling of olive presses from stone blocks (the development of the theory that the vats, well known throughout Judah, were not dye plants, but rather olive presses, and the dating of olive presses) and comparative material, see Eitam 1979: 150–54. For background and a description of the development of the technology involved in olive pressing, see Frankel 1984: chaps. 2–4. The primary research to date on the olive oil industry at Ekron has been done by a team headed by David Eitam, Curator of the Israel Oil Industry Museum, Natan Aidlin of Kibbutz Revadim, and Amir Shomroni, Engineer. Their efforts have concentrated on the survey conducted during 1985. A full report on the industry at Ekron was given in December, 1987, by the author and D. Eitam at the University of Haifa conference on the Olive Oil Industry. The revised conference volume is scheduled for publication in 1989 in the British Archaeological Report International Series.

[17] Using Broshi's coefficient of 250 inhabitants per hectare (figuring Ekron at 25 hectares), produces a total population of about 6,250. For the rationale of higher and lower coefficients, see Shiloh 1980: 29 and Stager 1985: 21, 23–24.

[18] Gezer, with an occupied area of 30 acres during the second millennium B.C. would have had 3,000 inhabitants (see n. 17).

[19] For a discussion of the association of cultic commodities and the possible relationships between cults, specifically altars, and the production of oil, see Stager and Wolff 1981. While the altars are presently only associated with Stratum IB (the post-Assyrian period), they may have been used in Stratum IC during the period of Assyrian domination. For a discussion of whether or not Assyrian rule included cultic imposition on vassal states, see Cogan 1974: 40–57 and Ahlström 1982: 8. In any case, the association of altars with the priestly class and the administration of the olive oil industry does not require Assyrian cultic imposition. It could have been the local priestly class which administered the olive oil industry.

[20] The suggestion to consider the influence of cultural building traditions was made by Arlene Rosen, the project's Geomorphologist. Building technology and specific construction techniques present in or absent from a particular cultural tradition defined by a geographic and/or political region seem to be attested during the Iron Age by Solomon's need to import builders from Tyre for construction work in Jerusalem (2 Sam 5:11; 1 Kgs 5:11; 1 Chr 14:1). A discussion of this and related problems can be found in Shiloh 1974: 165–78; 1979: 82–87.

[21] The Miqne ceramic data are presently being compared by type and ware group with the corpus from Tel Batash-Timnah. When this is completed, the Gezer Iron

Age II corpus will be integrated with the results of this study. In addition, there are other areas of on-going investigations involved in creating a data base for comparing Judean and Coastal sites and their possible interrelationship across the frontier zone of the Inner Coastal Plain. For example, neutron activation analysis for provenance studies has recently been completed on the Miqne and Ashdod evidence (Gunneweg and others 1986: 3–16) and a follow-up study focused on a comparative treatment of Iron Age II pottery at Miqne, Batash, and Ashdod is scheduled for publication in the Qedem Monograph Series. A comparison of the faunal remains from each site in the Interregional Project is also underway. An initial study on the animal bones from Miqne has been published (Hesse 1986: 17–27) and a second, comparative study is soon to be completed. Preliminary results on geoarchaeological research have already been reported for Miqne, Batash, and Lachish, three of the sites involved in the Interregional Project (Rosen 1986).

[22] The term Philistine has always been somewhat problematic, but on the strength of textual evidence has gained wide currency over the years in the scholarly literature. Recently, its use in describing a cultural entity in the Iron Age I period has been questioned (Bunimovitz 1986: 11–21). Our ultimate goal is to establish the quality of this term at the beginning of the Iron Age I period and then to see if, as the texts imply, there was indeed an ethnic continuum, a "Philistine" presence in the Coastal Plain for the 600 years of the Iron Age. Some of the specific questions to be addressed are: how different were the "Philistines" of the final phase of occupation in the seventh century B.C. from those Sea Peoples who first settled the site in the twelfth century B.C.; what traits of their culture remained after centuries of intensive exposure to Canaanites, Israelites, Judeans, Assyrians, and Egyptians; and how did the "Philistines" themselves affect their neighbors, allies, enemies, and conquerors?

[23] The interrelationship between Philistia and Judah may prove to be an even more difficult problem to solve than the question of what constitutes "Philistine" ethnicity. What is patently clear, even at this early stage of research, is that the unqualified use of material cultural indicators to establish interrelationships between material culture regions as well as to formulate cultural periods can often provide spurious results. When dealing with a geographic unit (a region, with historical dimensions and absolute chronological values, like the Coastal Plain in the Iron Age), it is logical to assume that its artifactual data can be considered as material culture indicators for new sites under study within that unit. However, when dealing with the question of interregional relationships, it is dangerous to assume that the presence of such material cultural indicators in another region, with its own well-defined material culture, proves an interregional relationship. All it proves is presence. To expand that statement requires the qualification of absolute and relative size and the evaluation of spacial and functional qualities of the sample. This would make it a measurable value, and only then a possible candidate for being a cultural indicator. For example, it seems logical from the evidence of the oil industry at Ekron that there must have been a strong interregional relationship between the Coastal Plain and the Inland Hill Country during the seventh century B.C. However, from the material culture evidence alone (the best example of which is the pottery), it is impossible at this stage of research to substantiate such an assumption. Nor would the few Assyrian ceramic forms found at Ekron in Stratum IB by themselves prove that there was Assyrian control of the site during the seventh century B.C. Yet this must have been true, based on the historical and economic evidence. The reverse is also true. For example, the absence of Mycenaean IIIC:1b pottery in Lachish VI may not prove a lack of contact with Philistia, nor may it be used to prove that this pottery must have appeared in Canaan generally later than the end of Lachish VI. It only proves a lack of such pottery in the twelfth century B.C. at a non-Philistine site (Dothan 1985: 174–75; Singer 1985: 113–14). The same cautions also need to be observed with regard to designating cultural periods. For example, in the Philistine period at Gezer there is a relatively small sample of Philistine Bichrome ware—less than 5% (Dever 1986: 87; Singer 1985: 117). While this material has been used, perhaps properly, as a period indicator, the data may only indicate a Philistine presence in a late Canaanite or early Iron Age city or the presence of trade goods.

[24] A key issue regarding town planning, relative both to the discussion of what constitutes Philistine culture and evidence of interrelationship between Philistia and Judah in the seventh century B.C., is the presence or absence of architectural features that have been claimed to be Israelite/Judahite. At this stage of research, when the main architectural features excavated have been from an industrial area, the sample is insufficient for such architectural evaluations. However, it is important to note that to date no evidence of a four-room house has been found at Ekron. Obviously, this will be an issue for further investigation. For a discussion of the value of the four-room house as a cultural indicator see Shiloh 1978: 36, 44–45, 1986: 94; Stager 1985; Dever 1986: 91, n 178).

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Archaeological Evidence for Movements of the Early "Sea Peoples" in Canaan

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Various groups of "Sea Peoples," the Shardina prominent among them, played an important role in Egyptian and Canaanite affairs as early as the reign of Ramesses II. Archaeology may be useful in determining the geographical movements and settlement sites of these early Sea People groups. Recent excavations at the ancient harbor-city of Akko have distinguished locally-made Mycenaean IIIC pottery, remains of metal and purple dye industries, and a portable mortar-like altar with incised graffiti of ships that may all be related to a settlement of the Shardina, dated to ca. 1200 B.C.E. by a scarab of Tewosret. Contemporaneous historical references suggest that the Shardina were settled at other sites along the northern coast of Canaan as well.

Additional evidence of early Sea People settlement has come also from Ashdod, where abundant examples of locally made Mycenaean IIIC pottery were found in Stratum XIII. In the succeeding Stratum XII, the planning of a fortified city, the appearance of a new bichrome pottery style, and the evidence of distinctive cult objects may be attributed to the settlement of Philistines at the time of Ramesses III. The identity of the earlier settlers of Stratum XIII, also with an Aegean background (Achaeans?), may be hidden under the name of one of the pre-Philistine entities mentioned in the biblical texts.

A note of caution regarding the title of this paper: although I will use the term "Sea Peoples" throughout to describe some of the groups who are known in the Eastern Mediterranean in the thirteenth and beginning of the twelfth centuries B.C.E., I think that this term may be somewhat misleading for an accurate understanding of the events and population movements of the period under discussion. The term "Sea Peoples" is actually quite modern It was coined by the great French Egyptologist, Gaston Maspero, in the late nineteenth century to describe the various invading and migrating peoples whom the ancient Egyptians themselves never classified by a single generic name. The Egyptian sources refer to several specific groups coming from beyond the "Great Green" or from "the northern countries in their islands," or the Mediterranean. For the Egyptians, the seas was merely an indication of these peoples' geographical origin—not necessarily intended to indicate their exclusive connection with maritime activity (Wilson 1969: 262–63).

I believe that recent excavations have shown that there was probably more than one wave of invasion, migration, or settlement in Canaan by some of the Sea Peoples; I would like to point out the contribution that archaeology has made to distinguish these movements and to suggest a possible identification for at least one of their participants.

Some new evidence has come to light from the excavations at Akko; this information may shed some light on the earliest appearance of one of the Sea Peoples in Canaan, its subsequent settlement pattern, and its historical context. The El Amarna letters depict Akko as a busy, flourishing harbor-city in the fourteenth century B.C.E. (M. Dothan 1976: 1). Later, the city appears on the list of Seti I's conquests in Canaan. For the thirteenth century we have documentation from Ugarit that mentions people from Akko, Ashdod, and Ashkelon. Ugarit most probably had maritime relations with these three cities in Canaan (see, for Akko: Dothan 1976: 1; for Ashdod: Dothan 1967: 8, 1971: 18–19; for Ashkelon: Schaeffer 1962: 141; Nougayrol 1970: 77–78). A relief and inscription at Karnak depict a campaign by Ramesses II in Canaan in which the city gate of Akko is shown collapsing (Wreszinski 1935: pl. 55a); results of excavations seem to confirm the destruction of the city at this time (Dothan 1977: 242; 1981: 111). It is clear, in any event, that the last city of the Late Canaanite (Bronze) Age II was certainly smaller than its predecessors, and except for the Middle Bronze rampart, was probably unfortified. Later, toward the end of the thirteenth century, a quarter in the town flourished near an apparent anchorage on the Na^{c}aman River on the southwestern outskirts of the tell (Dothan in press). The main remains of this period, however, have so far been found in the northern part of the tell, consisting mainly of potters' installations, a metal reworking area, and probably a purple dye workshop. In the potters' area, a large bilobate kiln was uncovered, standing on layers of ash and refuse. In the upper layer was found a damaged Mycenaean IIIB juglet (reused?). Inside the kiln and on the floor outside were sherds, most probably from its last use. Among those inside was a part of a bell-shaped bowl (*skyphos*), the other part of which was found on the floor outside. This piece is a typical Mycenaean IIIC:1 vessel, decorated in red with a characteristic antithetic wing motif (fig. 3.1a; for this type of vessel and decoration: T. Dothan 1982: 102 and fig. 3). The kiln itself is similar in construction to those found at Sarepta on the Lebanese coast, where Mycenaean IIIC:1b pottery was also found (Pritchard 1975: 71–84 and figs. 13–14).

Several other Mycenaean IIIC:1 fragments, the majority of them bowls (fig. 3.1b) but also some closed vessels (mostly stirrup jars), were found in other areas in layers parallel to that in which the kiln was found. Some of these sherds are decorated with hatched triangles, rhomboids with net filling, dotted scale patterns, etc., all applied in monochrome (figs. 3.1c–f, 3.2).

In Area F, above the destroyed MB IIA gate, an extremely interesting fragment of a krater with a bird (swan?) in monochrome was found (fig. 3.2d). The representation of the bird is very much related to those of Mycenaean IIIC:1b in the Aegean (for instance, in Perati) and can be seen as a prototype of the Philistine bird (for example, T. Dothan 1982: 198–203 and figs. 61–63). During the 1985 season, some sherds of Mycenaean IIIC:1b type also appeared in the newly opened Areas P and PH above the rampart near the city's supposed anchorage.

In general, the overall pottery forms and decorations from the Sea Peoples level at Akko seem to be much more related to the Mycenaean IIIC:1b pottery of this period in Greece and Cyprus than to the Mycenaean IIIC:1 pottery found at Ashdod (for example, Dothan 1972a: fig. 1 and pls. VIII–IX) described later in this paper. The everyday pottery vessels from this level, however, such as cooking pots and storage jars, continue the late Canaanite tradition and have good parallels in Ashdod Stratum XIII. In addition to the potters' workshop uncovered in Area A/B close to the potters' compound, there were several small installations that apparently were for metal working. These installations consisted of small circular structures attached to a section of a stone-paved floor and clay-lined depressions filled with black ash. On a nearby floor, we discovered two clay tools used in metal industry, one a crucible of the usual oil-lamp form, and the other with a spout on its flat side. Other remains consisted of fragments of a tuyere with a scorched end; a small clay funnel; and a copper slag, metal scrap, and fragments of tools that seem to have been deliberately cut for reworking, smelting, and recasting. This supposition appears to be confirmed by the discovery in the same level of a stone mold for casting jewelry, specifically earrings.

In addition to pottery and metal, evidence for the purple dye industry, although still fragmentary, has been distinguished. The beginnings and dissemination of the purple industry are among the most

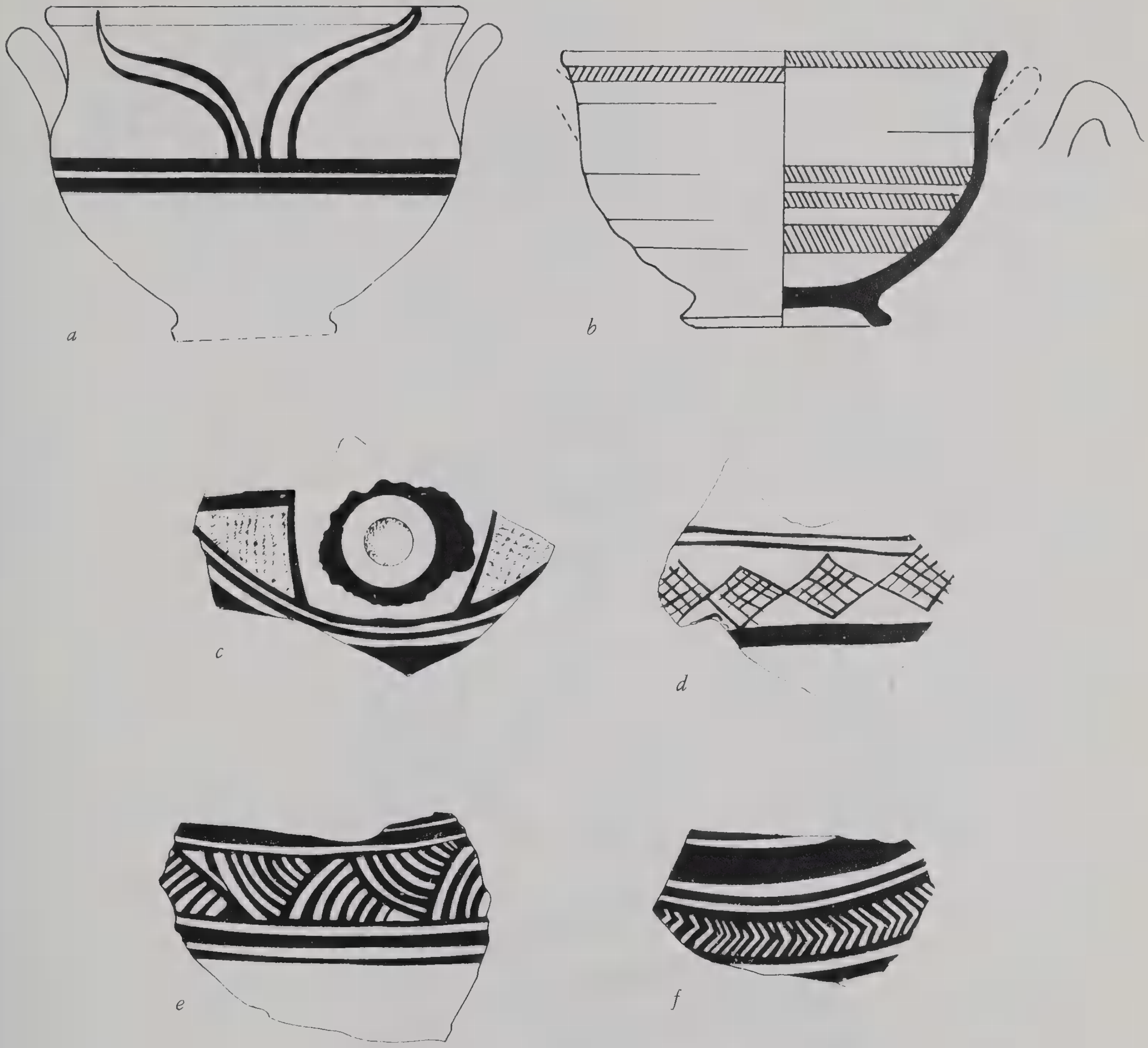

Fig. 3.1. Mycenaean IIIC:1b pottery type: (a) bell-shaped bowl with antithetic wing motif, decorated in red, (b) bell-shaped bowl, (c) hatched triangle design, (d) rhomboid with net filling design, (e) scale pattern, (f) band with chevrons.

persistent problems in the study of the social and economic history of the ancient Near East (for new evidence see Karmon 1986). At Akko, in several areas, the beddings of floors from the end of the Late Canaanite (Bronze) Age were found to have been made of crushed *murex* shells from which the purple was produced. Such shells were also found in a pottery vessel with an extremely thick wall and low-placed handles that was probably used as a mortar in which the *murex* shells were crushed. Even more suggestive evidence came from the 1985 trial season from the section in Area A/B in the accumulation layers above the rampart of the Middle Canaanite Age. There, in addition to ovens and remains of stone and burnt brick installations, a sherd of a large vessel was found, its inner side

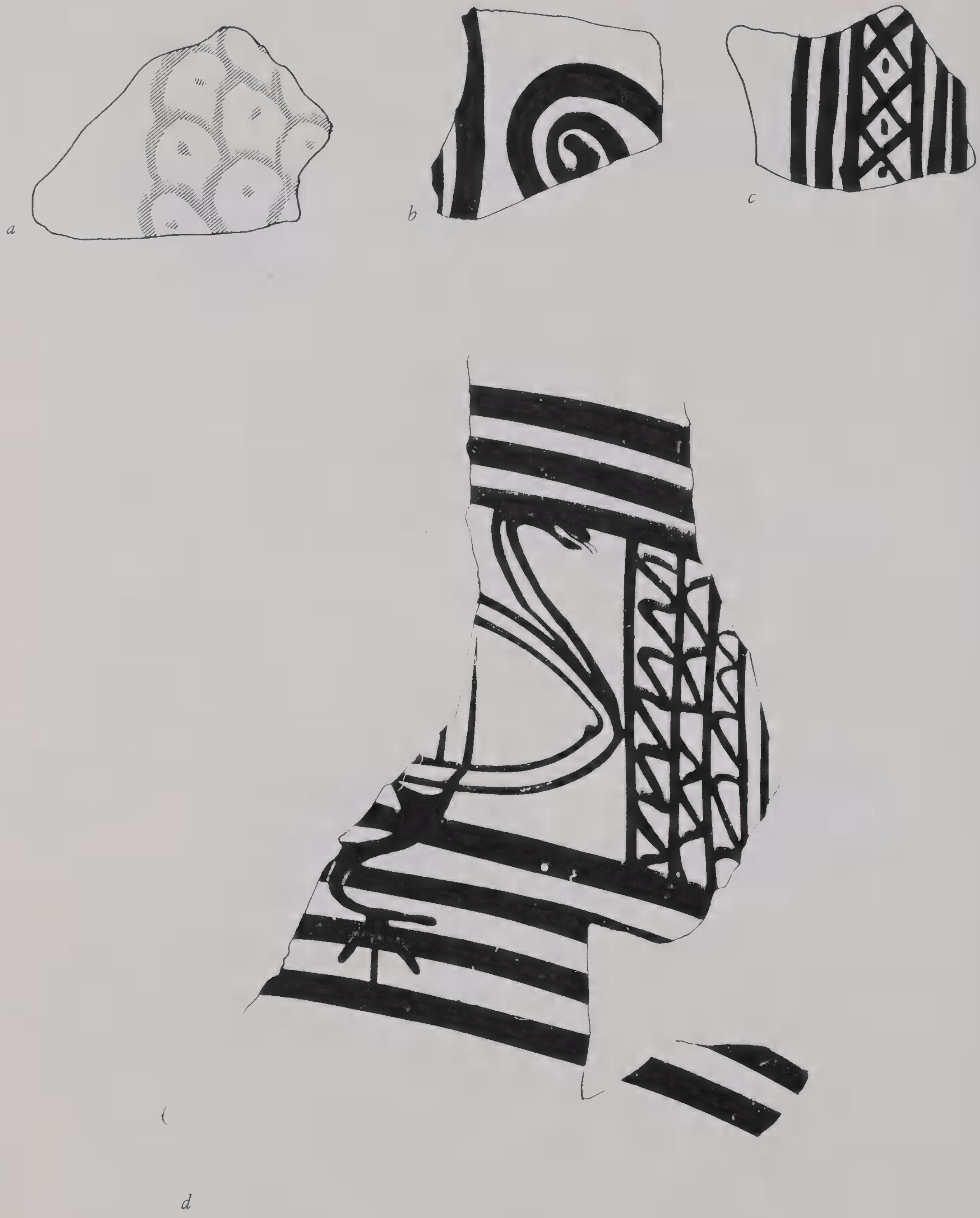

Fig. 3.2. *Mycenaean IIIC:1b pottery designs: (a–c) scale, spiral, lattice; (d) krater fragment with bird design.*

completely covered with purple dye, the outside blackened from fire. It seems certain that the dye was prepared in this vessel, which should be dated on the basis of the pottery found with it to the end of the Late Canaanite (Bronze)—Early Israelite (Iron) Age transitional period. A large jar used for the preparation of purple was excavated in the nearby city of Tel Keisan in a stratum where an imported Mycenaean IIC:1 stirrup jar was also found (Briend and Humbert 1980: 226–330). Stratigraphically and chronologically, the purple evidence matches that of a nearby pottery and metal workshop and indicates the development of industrial activities in Akko during this period. Could a specific group of settlers in this region, well known for its purple industry and trade in later periods, have been instrumental in the dissemination of the purple dye industry and its trade at the end of the Late Canaanite period? The answer to this question is not at hand, but the intriguing confluence of several types of evidence might provide a possible clue. The sudden appearance of a variant of the Mycenaean IIIC:1 pottery and a concentration of other industries supports the hypothesis of a specific ethnic group settling at Akko at the end of the Late Canaanite (Bronze) Age. At this point it seems relevant to introduce a very interesting find from Area H to the west of the industrial complex that seems to support this hypothesis. A stone, mortar-like, moveable altar coming from the same period has incised graffiti of ships—coasters, with rounded ends, not unlike those known from the walls of the roughly contemporary temple at Kition (Artzy 1984). This object may serve as an additional argument for the maritime background of the newcomers to Akko and probably also suggests the way they came to Canaan.

From the Egyptian sources we know that at least one of the Sea Peoples, the *Shardina*, or *Sherden*, played a role in Egyptian and Levantine affairs as early as the El Amarna period, long before the later period of invasions at the end of the 19th and beginning of the 20th Dynasties (Daniel and Evans 1975: 741–42; Barnett 1975: 366–71). The Shardina became increasingly prominent during the 19th Dynasty as mercenary forces. The best known instance was their recruitment in the army of Ramesses II in his wars against the Hittites (Faulkner 1975: 225–47). During the reign of Ramesses' son and successor, Merneptah, the allegiance of at least some groups of Shardina shifted and we hear about their participation in the great battle in the Western Delta as allies of the invading Libyans (Faulkner 1975: 233–34). It seems probable that groups of Shardina (either as Egyptian mercenaries or as hostile invaders) were actively involved in other conflicts in the eastern Mediterranean in this period. Taking into consideration the sketchiness of the Egyptian account of the battles against cities and peoples of Canaan mentioned on Merneptah's "Israel" stele, it seems possible that the Shardina played some role in these disturbances, perhaps even as settlers, although specific historical information about these encounters or migrations for this period has not been found (see, however, Sandars 1985: 106–7, 117–37, 198–99; for possible Shardina in Ugarit: Heltzer 1983: 119–23).

Later on, they appear in the Onomasticon of Amenope, dated to ca. 1100 B.C.E., where they are mentioned prior to two other Sea Peoples: *Tjekker* or *Shiqalaya* and *Palashtu* (Philistines; Gardiner 1947: 194–99, n. 268). Since we know that the Shiqalaya and the Philistines lived in the middle and southern coast of Canaan respectively, it appears that the Shardina occupied the section to the north of the two other groups, from the Carmel ridge northward to Tyre. It seems that now we at last have some archaeological evidence, supported by circumstantial historical and literary sources, to define the Shardina at Akko as a new ethnic element. We have, however, still to fix the chronological framework for this ethnic phenomenon.

From the point of view of the absolute chronology of this stratum in the tell, the most significant find was a scarab of Tewosret (identified by B. Brandl). This scarab was found in a lower layer of the above-mentioned thick accumulation of ash that covered the area around the potters' and metal workers' site. Although this scarab cannot provide us with an exact date for the beginning of the workshop area, it may provide a general indication of the time of the establishment of the settlement of Shardina at Akko. The scarab of Tewosret could not have been made earlier than 1204 B.C.E. (according to the high chronology; *Cambridge Ancient History*) or 1187 B.C.E. (according to the low chronology; Wente and Van Siclen 1976).

In summary, that there were large groups of Shardina in the Levant already in the fourteenth century B.C.E. is known mainly from the Egyptian sources; some of these were mercenaries and others pirates, called the "Shardina of the Sea." They are known from Ugarit mainly as royal military servicemen (Heltzer 1983). During the troubled days of Merneptah and his successors at the end of the 19th Dynasty, some of these groups might have settled on the coast north of the Carmel ridge on some of the already partly destroyed (by Ramesses II?) sites such as Akko. This did not have to be a conquest; it may have been quite a peaceful process of settlement, even with Egyptian consent, (for such may have been needed) since Akko was for hundreds of years an old Canaanite city under Egyptian sovereignty. The Amenope text confirms the Shardina presence in this neighborhood a hundred years later, around 1100 B.C.E. I would suggest that the Shardina groups settled also in the towns in the vicinity of Akko and to its east and north, where Mycenaean IIIC:1b levels have been uncovered recently at sites such as Tel Keisan (Balensi 1981), possibly also at Tyre (Bikai 1978: pl. XL), Sarepta (Herscher 1975: 90–91 and fig. 26:3–5), and Ras Ibn Hanni (Bounni and others 1979: 237–57 and fig. 19).

Against the background of the extended presence and activity of the Shardina in the affairs of the eastern Mediterranean, it is perhaps appropriate to reassess the archaeological evidence for early groups of Sea Peoples elsewhere along the Canaanite coast. Some of the peoples mentioned in the accounts of their invasion in Year Eight of Ramesses III in 1191 (high chronology; 1174, low chronology) have been verified by references in other ancient sources or by archaeological finds. These are the *Shardina* whom we just discussed, the *Tjekker* (now convincingly vocalized and identified as *Shiqalaya*), and the *Philistines*.

A better understanding of the Shiqalaya, known to us from the Report of Wenamun to have occupied the central coast of southern Canaan in the eleventh century B.C.E., will probably have to wait for the results of the ongoing excavations in the harbor and lower city levels of Tel Dor, their main center. A certain amount of information about their material culture, especially their tombs and weapons, has emerged from the excavations at Tel Zeror (Kochavi 1978: 1224–25) and possibly also from a coastal area at Dor, where ashlar walls appear in several structures of ca. 1200 B.C.E. date (Raban 1981: 293–305; 1983: 238–41; Raban and Galili 1985: 334–39).

The Philistines are of course the most well known of all the Sea Peoples, not only because they were apparently the most powerful contingent in the invasion of Year Eight and their subsequent activity in Canaan is vividly described in the biblical books of Judges and Samuel, but also because several of their most important settlements have been and are being extensively excavated. Now some of the finds from the relevant levels at Ashdod, one of the five main Philistine cities, should be concisely reviewed, stressing the relevant material as yet only partly published (M. Dothan 1967; 1971; 1972a; 1975; 1979).

There are differences between the historical situation at Ashdod and that at Akko. Although Ashdod, like Akko, is mentioned in the Onomasticon of Amenope (ca. 1100 B.C.E.), it does not appear in earlier Egyptian texts. This absence probably indicates that the flourishing Canaanite city of Ashdod, which is repeatedly mentioned in the commercial documents from Ugarit, remained loyal to Egyptian rule throughout the entire Late Bronze Age. In our excavations of Ashdod's upper city, we found clear evidence of the prosperity and Egyptian connections of the city. The pottery of the last Canaanite stratum (XIV) included local Canaanite forms, imported Mycenaean IIIB vessels, and Late Cypriote ware of well-attested types of the late thirteenth century B.C.E., all testifying to the city's connection to the international trading network of the period (M. Dothan 1978: 126). One of the most significant finds that should be ascribed to this stratum, together with a Ramesses II scarab and cartouches, is a segment of a stone doorpost, probably from the destroyed city gate or the fortified residence, that bears a fragmentary but significant hieroglyphic inscription possibly dating to the XVIII or XIX Dynasty (to be published).

Most of this Canaanite city was destroyed in an intense conflagration that left deposits of ash and burnt debris overlying the ruins to a height of 1 m in some places (M. Dothan 1967: 81). Following this destruction, which most probably took place near the end of the 19th Dynasty, the nature of settlement at Ashdod changed completely. Although the new settlers reused some of the ruined Late Bronze Age structures, their material culture was entirely different. In Area G, on the northern edge of the tell, the builders of the first Iron Age stratum (XIIIB) used the inner partition walls of the Late Bronze Age fortified residence, converting part of the ruined building into a pottery workshop area. Although the kiln itself was not preserved, scorched soil, charred wood, and pieces of vitrified clay and wasters served as clear evidence of potters' activity here. The most important find in this area was a group of 27 complete vessels, most of which were stacked upside down on a floor, apparently as finished goods for subsequent distribution or sale. The stylistic connections of this pottery provided a clear indication of the identity of the inhabitants of Ashdod in this period.

The vessels found in the potters' workshop area in Area G consist mostly of bell-shaped bowls (*skyphoi*) or carinated, strap-handled bowls with simple monochrome decoration of bands both inside and outside, which is characteristic of the Mycenaean IIIC:1b "simple" style. Other forms found here included a few closed types such as the feeding bottle, beer jug, stirrup jar, and *lekane*. The closest parallels to this pottery came from sites on Cyprus (Enkomi, Kouklia, and Sinda) and from the Aegean (Perati; T. Dothan 1982: 37, 41, 105–6). At Ashdod, the Mycenaean IIIC:1 shapes and ornamentation are alien to the local pottery tradition, which was generally still preserved in the coarse wares and large vessels of the early Iron Age strata. Yet it is significant to note that the Mycenaean IIIC:1 vessels were not imports; the results of neutron activation analysis indicate that they were produced at Ashdod itself (Asaro, Perlman, and Dothan 1971: 169–75). It seems evident, therefore, that the city was reoccupied after its destruction at the end of the Late Bronze Age by newcomers with close connections to the culture of the Aegean-Mycenaean world.

To the north of the potters' workshop area in an open courtyard, these newcomers erected a cultic installation consisting of a square structure made of bricks and a reused Egyptian stone base for a round pillar, both of which were found covered with sherds, bones, and traces of burning. These structures may have served respectively as an altar and the base for an image (Dothan 1969: 244). Among the small finds, a cylinder seal with incised schematic human figures and what seems to be script are worth mentioning. The script, not yet finally deciphered, may belong to one of the variations of the Cypro-Minoan scripts (M. Dothan 1972b: 6, photo lower left; Stieglitz 1977: 97).

In a somewhat later phase (Stratum XIIIA), some changes were evident in this area—the construction of new floors and walls, for example—but the most significant change was the appearance of a new ceramic development: some Philistine sherds were found, together with the Mycenaean IIIC:1 ware. It is clear that the transition between Stratum XIIB and XIIIA was not violent. On the contrary, this transition between two phrases seems to represent the peaceful integration of a new group of settlers who shared a similar Aegean background with the original settlers who produced the early Mycenaean IIIC:1 pottery.

It seems that the Philistine settlers eventually became the predominant cultural element at Ashdod, for while Philistine bichrome pottery is still far less common than Mycenaean IIIC:1 pottery in Stratum XIIIA, it replaces it to a very large extent in the succeeding Stratum XII. We may also note the extensive changes that occurred in other facets of the material culture of the city in the transition to Stratum XII. While Stratum XIII was of relatively short duration (which can be seen by the fact that the inhabitants still utilized the existing ruins of the Late Bronze Age fortified residence), Stratum XII represents a complete change in the city plan in Area G. The most important innovation was the construction of a city wall on the northern side of the tell in Area G through the incorporation of the outer wall of the Late Bronze residence with a parallel wall. The space between these two fortification lines was reinforced by using the thinner, perpendicular partitions of the Late Bronze fortified residence, thus creating a quasi-casemate wall that surrounded at least this part of the city. In addition, the levels of the Stratum XIII rooms were raised, and the pottery discovered on them displayed the total predominance of the newcomers: vessels decorated in the elaborate Philistine style, such as kraters, beer and stirrup jugs, and bottles in bichrome decoration.

This progression of cultures from Stratum XIII to XII was also seen clearly in Area H on the western slope of the acropolis, where the main feature was a street dividing two complexes of buildings. The northern one was a large building consisting of a courtyard and a few smaller rooms. Although this building changed little throughout Strata XIII and XII, the two distinct phases that were distinguished in some places underline the differences in material culture and mitigate against their continuous, internal development.

The pottery of Area H, both in Stratum XIII and Stratum XII, partly reflects a continuation of the Canaanite tradition, especially in large vessels and utilitarian forms. The decorated pottery, in contrast, reflects the influence of two distinct groups. As in Area G, Mycenaean IIIC:1 ware appears in Stratum XIII in Area H, including somewhat rich decorative motifs such as antithetical stemmed spirals (some with net patterns in their center), an element that does not appear in the later Philistine ware. In Stratum XII, Philistine Bichrome Ware becomes the dominant style. Although it shares a common Aegean background with the Mycenaean IIIC:1 style, its differences are obvious—common use of the characteristic bichrome decoration, mostly on a white slip, and the unique Philistine bird motif.

Architecturally, the northern building in Area H also demonstrates the clear change in distinct though related cultures. Although the basic layout of the large northern building remained similar throughout Strata XIII and XII, there is evidence for a change in the function of the structure, especially in its southern end. Here, an apsidal brick structure was built above a rectangular installation of Stratum XIII. Some of the small finds are clearly of a cultic character and they highlight the distinctiveness of Philistine culture in comparison to its immediate predecessor. However, the most significant element of the Philistine cultural innovation of Stratum XII is the seated clay figurine nicknamed "Ashdoda"—a type of deity that does not appear in Stratum XIII. It seems that with the arrival of the Philistines, the local cult centered around the worship of a female goddess, whose slightly earlier prototype can be found in the Aegean cult of the Late Mycenaean IIIB period and also in Late Cypriote IIC. One more element worth mentioning from this stratum is a pyramidical inscribed stamp on which the individual signs of the script may be compared to signs in the various Cypro-Minoan syllabaries.

Summing up Stratum XII at Ashdod, we may say that in their divergence from some of the Aegean traditions they shared with the earlier Sea People settlers (mainly in cult, bichrome pottery, decorative styles, and architecture), the Philistines of Stratum XII established the foundation of a long-lasting political and cultural entity at Ashdod.

In contrast to Akko, where the identification of the arriving Sea People group, the Shardina, is relatively clear-cut, the situation at Ashdod is somewhat more complex. While there is ample textual and archaeological evidence for identifying the settlers of Stratum XII as the Philistines, the clear distinction between the culture of Stratum XII and its predecessor, Stratum XIII, admits the possibility that the culture of Stratum XII should be identified with another ethnic group. Admittedly, one cannot yet give an unambiguous answer, but a proposal may be offered that seems to fit well with the archaeological evidence.

Since there is a clear distinction between the Philistine culture of Stratum XII at Ashdod and the culture of the previous Stratum XIII, we must seek a separate historical context and identification for the earlier Aegean settlers at Ashdod.

As already mentioned, certain of the Sea Peoples were already posing a military threat to Egypt in the time of Merneptah (ca. 1224–1213 B.C.E. high chronology; 1212–1202 B.C.E. low chronology). The best-known incident in this struggle is Merneptah's war against the coalition of Libyans and Sea Peoples in the Western Delta in his Year Five (ca. 1220, high, or 1208, low). We known that Merneptah also was active in Canaan at this time, but we have only the rather meager information on the "Israel" Stele to provide us with details. I would suggest that the first appearance of the Mycenaean IIIC:1 pottery at Ashdod represents the possible arrival of some groups of Sea Peoples at this time, perhaps one of the groups who had joined in the unsuccessful Libyan coalition or another one somewhat later, during the last kings of the 19th Dynasty. Such groups may have taken advantage of the chaotic state of affairs in Canaan in this period in order to gain their first foothold there.

We find a similar situation on Cyprus during this period: an early wave of Aegean invaders attacked and settled parts of Cyprus (Sinda, Maa, and Kouklia, for example) at the start of the Late Cypriote IIC period (Karageorghis 1982: 89–94; Muhly 1984: 50–55). The settlement of some of these groups is connected with the first appearance of Mycenaean IIIC:1 pottery, in particular, some types that are very close to the ware from Ashdod XIII. On Cyprus, the makers of the Mycenaean IIIC:1 have been identified by the majority of scholars as *Achaeans*, refugees from the destroyed centers of the Mycenaean world. In light of the general similarity of the events on Cyprus with those on the Philistine coast, it seems possible that the archaeological evidence reflects a parallel phenomenon. Although an identification of an earlier wave of Sea Peoples in Canaan should first of all be assessed in the light of the biblical names for the pre-Philistine inhabitants of the coast (Avvim, Caphtorim, Rephaim, and particularly, Anakim), it may be suggested that the parallel or simultaneous appearance of Achaeans in Cyprus during this period may lead us in the right direction.

Regarding the absolute chronology of the settlement of the first group of Sea Peoples (or Achaeans) at Ashdod, I would suggest that we have to rely on the same evidence we used at Akko. The scarab of Tewosret serves as our best indication for the date of the disappearance of the imported Mycenaean IIIB wares, and so the first appearance of the Mycenaean IIIC:1 pottery must be placed relatively soon after, ca. 1204 (high) or 1187 (low). Whichever chronology we accept, we can postulate a duration of 15–20 years for the Mycenaean IIIC:1 (or Achaean) settlement at Ashdod Stratum XIII. The foundation of Stratum XII, the first true Philistine city, is probably connected with the Egyptian-sanctioned settlement of the Philistines during the reign of Ramesses III, whose scarab was found in Stratum XII in Area G.

The accepted date for this settlement has usually been placed soon after the Great Land and Sea Battle of 1191 B.C.E. or 1175 B.C.E. respectively, but recently G. A. Lehman has again pointed out that the "South Stele" at Medinet Habu refers to conflict between Ramesses III and a coalition of *Tjekker* (*Shiqalaya*), *Palashtu*, *Dannuna*, *Weshesh*, and *Sheklesh*, continuing as late as the twelfth year of his reign (Lehmann 19xx). Obviously, the settlement of these peoples could not have occurred until the hostilities between them and the Egyptians were over, which could not have been earlier than ca. 1180 or 1170 B.C.E. This date provides, as stressed above, a 15–20 year duration for the earlier wave of Sea Peoples who arrived on the Canaanite coast in the last years of the 19th Dynasty.

Naturally, the final word has not yet been offered on the Egyptian chronology, which is the basis for all of the absolute dates. But the archaeological evidence is quite unambiguous in helping understand the general situation. Evidence for an early wave of Sea Peoples' movements and settlements has been detected in excavations and surveys, not only along the coasts of Israel and Cyprus, but all the way from Ibn Hani in Syria to Antigori in southern Sardinia (Ferrarese Ceruti 1975: 243–53; M. Dothan 1984: 105–15). The archaeological situation that seems to be emerging is of a complex and wide-ranging movement of peoples throughout the entire Mediterranean at this time. It was not—as Ramesses III would have us to believe—a *blitzkrieg*, but population movements that lasted at least a generation, from the later days of Merneptah into the time of Ramesses III. Our best hope for learning more about this historical phenomenon is to accept rather than ignore its length and complexity.

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The Collared-rim Jars and the Settlement of the Tribe of Dan

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The date of the conquest of Laish and the Settlement of the Tribe of Dan in the north may now be examined in the light of archaeological evidence. In the course of the excavations of Tel Dan a number of collared-rim jars were found in pits that had been dug in a level of destruction of the Late Bronze Age. With the collared-rim jars were vessels from the beginning of the Iron Age. The collared-rim jars probably were brought to the site by the tribe of Dan when they moved north from their original location near the coast. The archaeological evidence points to a date at the end of the thirteenth or beginning of the twelfth centuries B.C.

Some sixty years ago, Hans Kjaer of the National Museum in Copenhagen, in the course of the excavations of ancient Shiloh, found a number of vessels "with a distinctly pared-off ribbon in low relief" (Kjaer 1930: 101). Kjaer was thus the first to call attention to this type of vessel. Although his dating in Early Iron (Kjaer 1930: 105) was disputed forty years later by two of his countrymen (Buhl and Holm-Nielsen 1969: 34), Kjaer's dating has withstood the test of time.

About ten years after Kjaer's discovery, Albright noted the appearance of this type of vessel at other sites, and because of the strip of clay below the rim, referred to them as "collared store jars," "collared rim on store jars" (Albright 1934: 12). Eventually, they came to be known as *collared-rim jars* or *pithoi*. In discussing these and other vessels in 1937, Albright wrote: " . . . last year the writer was not yet ready to claim this pottery specifically Israelite but this hesitation no longer exists" (Albright 1937: 25).

Since that time, numerous examples of collared-rim jars have come to light in many excavations. An extensive literature about them developed. Albright's views were accepted by some and rejected by others. The list of scholars who discussed the subject is long. Reference to them may be found in Amihai Mazar's comprehensive article (Mazar 1981) and Israel Finkelstein's doctoral dissertation (Finkelstein 1983). According to Mazar, the northern limit of the distribution of the collared-rim jar "is the Valley of Jezreel and ᶜAkko." When mentioning Dan, Mazar calls attention to a different type of pithoi which appears in Iron Age I sites and which retains northern traditions of the Late Bronze Age (Mazar 1981: 28). It is true, of course, that the Galilean pithos is found at Dan, as well as at other sites in Galilee. What distinguishes Dan from other sites, however, is its large number of collared-rim jars.

Already in the course of the first seasons of excavations of Tel Dan in the late 1960s and early 1970s, many collared-rim jars were discovered.[1] Some of them are shown in fig. 4.1 and figs. 4.2–4.4. The latter were found in a level of destruction ascribed to Stratum V (fig. 4.5) together with many Early Iron vessels (figs. 4.6, 4.7) dated to the first half of the eleventh century B.C. Similar vessels were found, for example, in Hazor XI, Beth Shean VIA, and Afula IIIA, dated generally to the middle or the

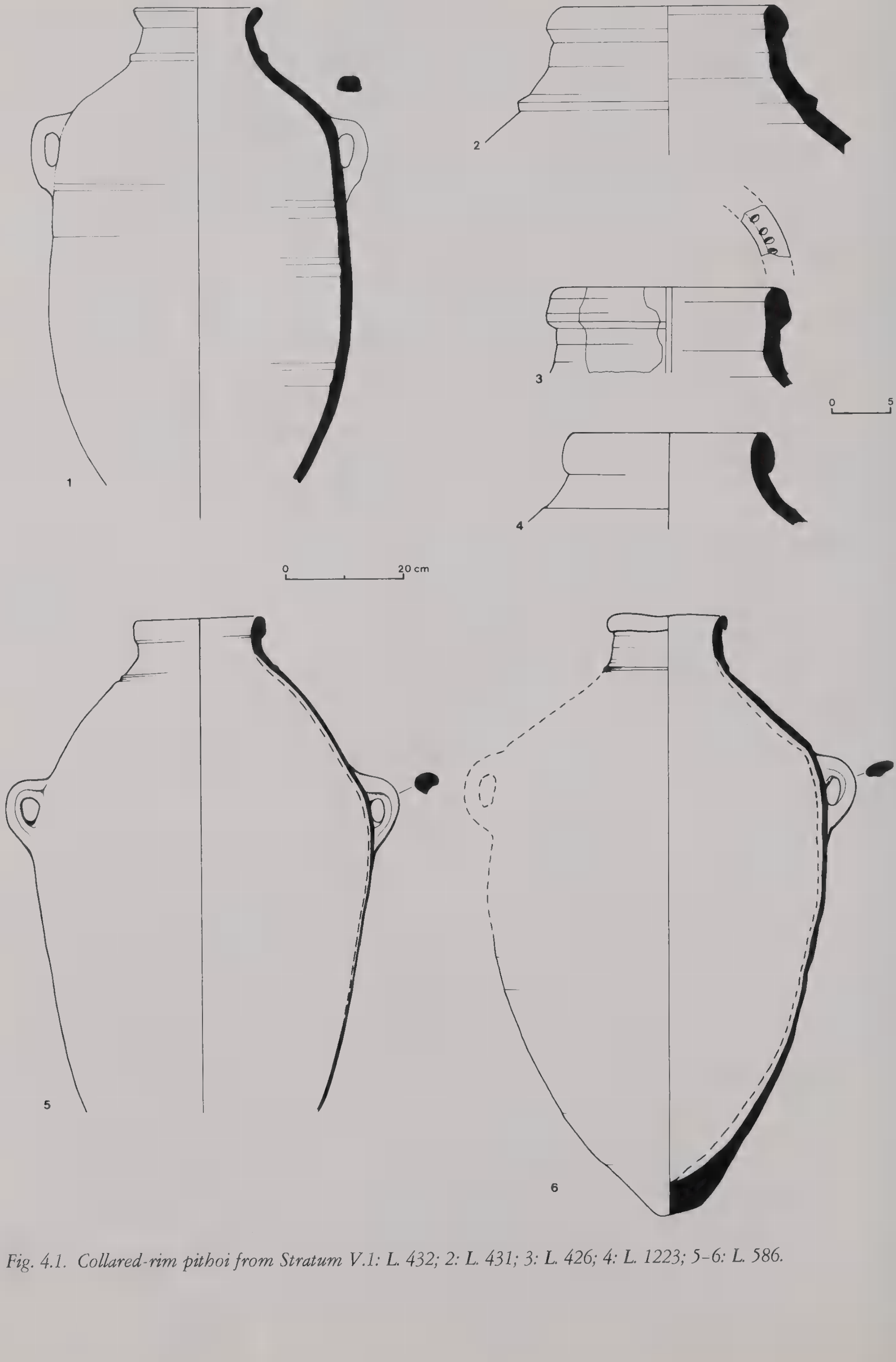


Fig. 4.1. Collared-rim pithoi from Stratum V.1: L. 432; 2: L. 431; 3: L. 426; 4: L. 1223; 5–6: L. 586.

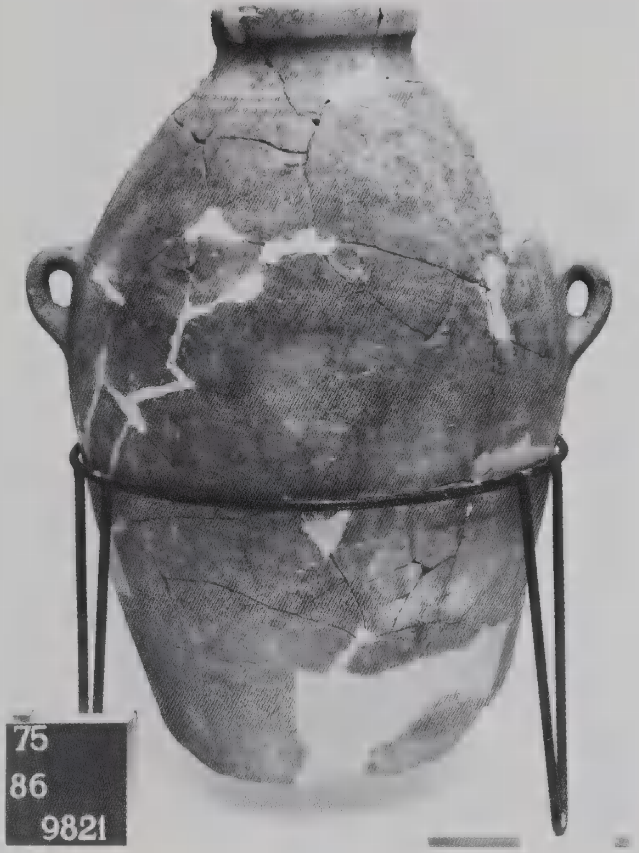


Fig. 4.2. Collared-rim pithoi from Stratum V.

first half of the eleventh century B.C. The collared-rim jars found in Stratum V at Tel Dan were dated accordingly to around 1050 B.C. (see also Biran 1974: 35–38; 1980: 173–74). It was reasonable to assume that the collared-rim jars from our Stratum V were already in use by the inhabitants of Dan for a generation or two, or perhaps more, before the destruction of Statum V.

The assumption that the collared-rim jars appeared at Tel Dan even earlier was confirmed when part of a collared-rim jar was found in a storage pit belonging to Stratum VI during the 1975 season (fig. 4.16:8).[2] As more and more storage pits (some of them stone-lined) were uncovered in subsequent seasons, more collared-rim jars were found in Stratum VI. The significance of this discovery for the territorial history of Tel Dan became apparent when it was observed that Stratum VI with its many pits and collared-rim jars follows immediately the Late Bronze strata of occupation of the city then called Laish.

The Late Bronze Age of Laish at Tel Dan is represented by a highly developed material culture. Tomb 387, the "Mycenaean" tomb excavated in 1969 and 1970, contained a complete charioteer vase, twenty-eight Mycenaean vessels, three Cypriot vessels, gold and ivory objects, weapons, a bronze bowl, bronze oil lamp, basalt bowls, and seventy-five local pottery vessels (Biran 1970: 92–94; 1971: 5–6; 1974: 32–35; Karageorghis 1971: 11–13). Tomb 387 was found in Area B (see map, fig. 4.8) where, on the floor of a house, an LB II vessel was found (figs. 4.9, 4.10). In the course of twenty seasons, more

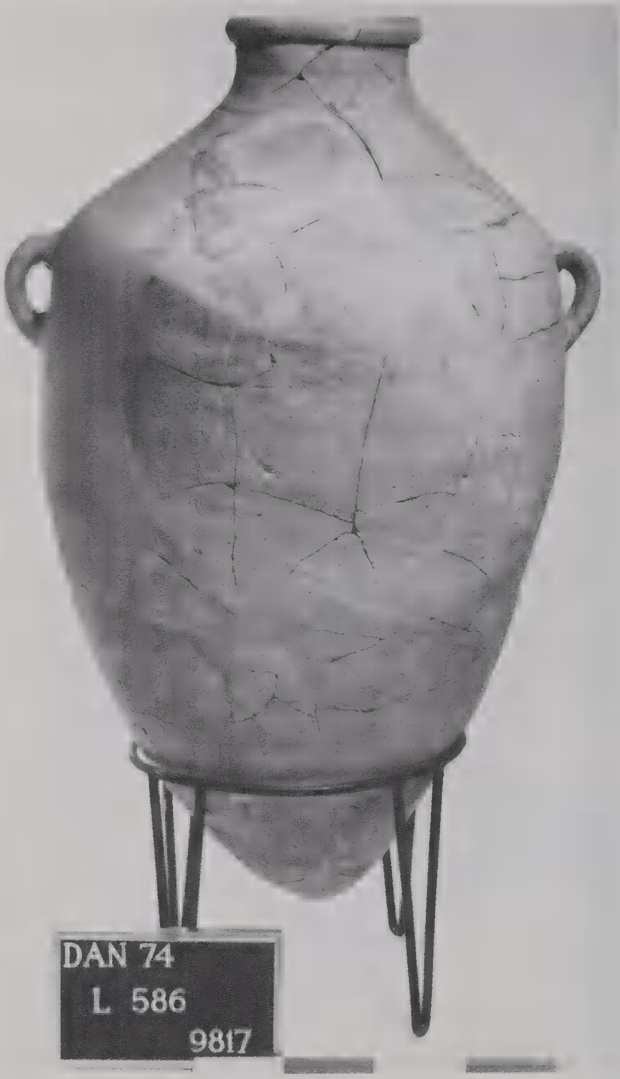


Fig. 4.3. Collared-rim pithoi from Stratum V.

evidence of Late Bronze Laish came to light from the other excavated areas, leading to the conclusion that Laish in the thirteenth century B.C. was a city of considerable importance and wealth.

The stratigraphic sequence of the transition from the Late Bronze Age (our Stratum VII) to Early Iron (Strata VI and V) in Area B is shown in the section shown in fig. 4.11. A layer of ashes separates Stratum VII from Stratum VI. Fig. 4.12 shows representative material from Stratum VI (Loci 435 and 444). The fragment of the collared-rim jar shown in fig. 4.12:5 was found on the floor of Locus 435. This floor ends in a pit (Locus 444) in which a "Galilean"-type pithos was found (fig. 4.12:6). The pottery from Stratum V is shown in figs. 4.1–7. The pits of Stratum VI were not always easy to detect. Some, however, were stone-lined (fig. 4.13), and others were dug into a level of pebbles (fig. 4.14), so it was possible not only to determine their exact outline, but also to consider them as sealed loci because there was minimal intrusion from the sides.

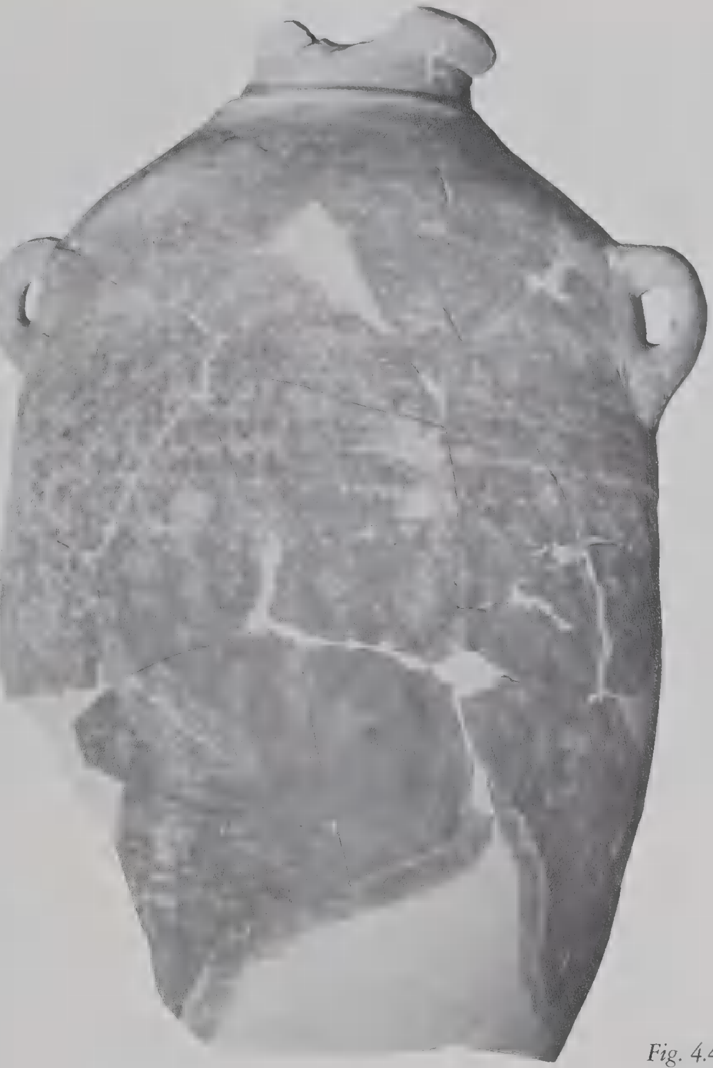


Fig. 4.4. Collared-rim pithoi from Stratum V.

The stone-lined pit 1225 has a diameter of 1.24 m and was excavated in 1975 to a depth of 1.30 m. A complete pithos, a complete cooking pot, and parts of other Early Iron vessels were found (figs. 4.25, 4.16). Also in Locus 1225 was part of a collared-rim jar (fig. 4.16:8). The pithos in Locus 1225 is of the "Galilean" type, similar to that found in Locus 444. First discovered by Aharoni at Tel Harashim (Tuleil), it was dated to the beginning of the twelfth century B.C. (Aharoni 1937: 22). It is now known from other sites of northern Galilee dated to the beginning of Early Iron (Mazar 1981: 28). The collared-rim jar found in Locus 1225, together with the "Galilean"-type pithos, would thus also belong to the beginning of Early Iron.

The dating of Stratum VI to the first half of the twelfth century B.C. is based on the typology of the pottery vessels that make their first appearance in contexts of the Early Iron Age and do not appear in the thirteenth century at Dan or at other sites.[3] Thus, although the cooking pot of the

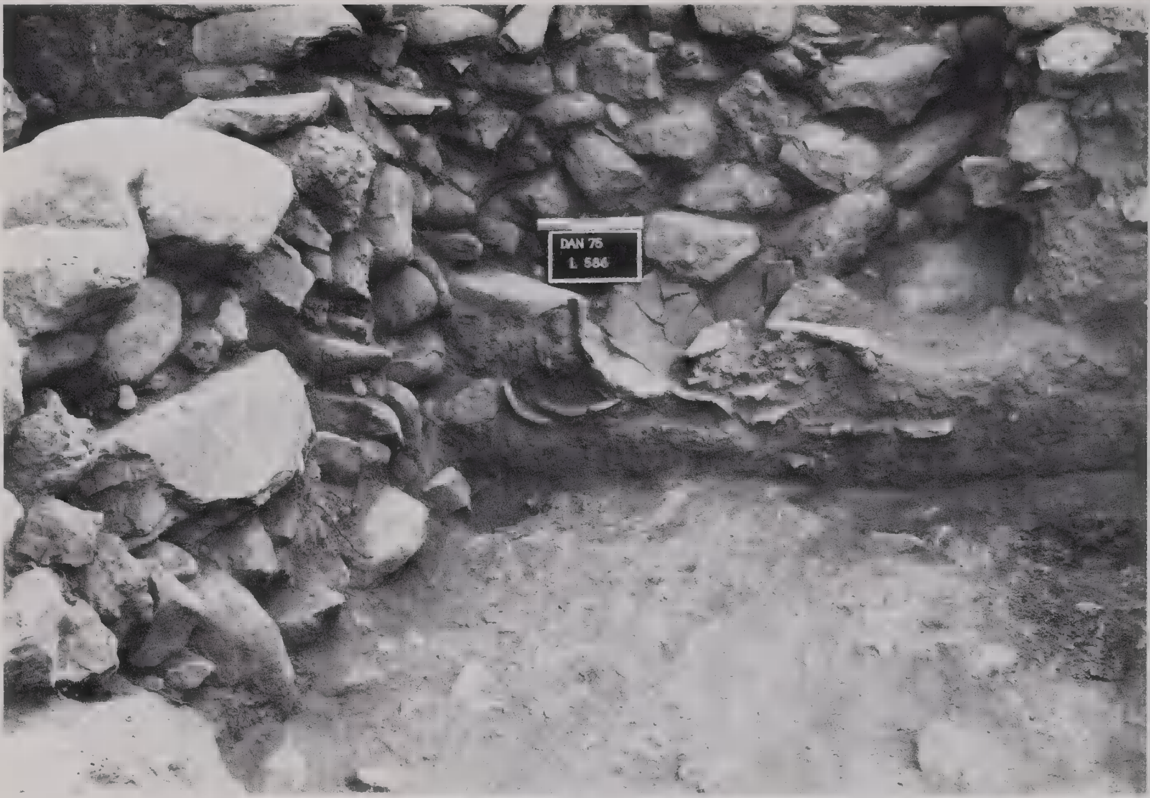


Fig. 4.5. Collared-rim pithos in destruction layer V.

beginning of the twelfth century is directly descended from its Canaanite prototype, it differs in the rim. The rim of the thirteenth century cooking pot (fig. 4.17:2) is everted. The rim of the Stratum VI vessel is folded, triangular in section, still short, and straight or inturned (figs. 4.12:4; 4.16:2–6; 4.18:2, 4.12–14; 4.19:4–11). Other vessels that make their appearance in the twelfth century are small bowls with rounded walls (fig. 4.18:1) and the jar with the ridged neck (fig. 4.18:6). Parallels to the type of vessels of Stratum VI are to be found in Hazor XII, Beth Shean VIB, Afula IIIB, Tel Qasile XII, and Giloh. The fact that the Cypriot and Mycenaean imports and the carinated bowl so prevalent in the thirteenth century (see, for example, fig. 4.17:1, 4, 6, from Stratum VII at Dan) cease to appear in Stratum VI supports our date for Stratum VI.

The vessels of Dan V develop from Stratum VI. Our assemblage may be compared to Hazor XI, Beth Shean VIA, Afula IIIA, Megiddo VIB, and Tel Qasile XI. Stratum V ends in a violent destruction. We note that the "Phoenician"-type pithos in Dan V (fig. 4.7:9, and 11) is found in Tyre Stratum XIV, which comes to an end in 1070/1050 B.C. (Bikai 1978: 43). The absence of Cypro-Phoenician Bichrome Ware in our Stratum V lends support to a mid-eleventh century date for the destruction of Dan V. Cypro-Phoenician Bichrome Ware appears in Dan and elsewhere only in the second half of the eleventh century B.C.

The excavation of pit 1225, resumed in 1984, reached stones 0.70 m further down.[4] Another pithos with distinctive characteristics not unlike those of the collared-rim jars was found (fig. 4.16:10).

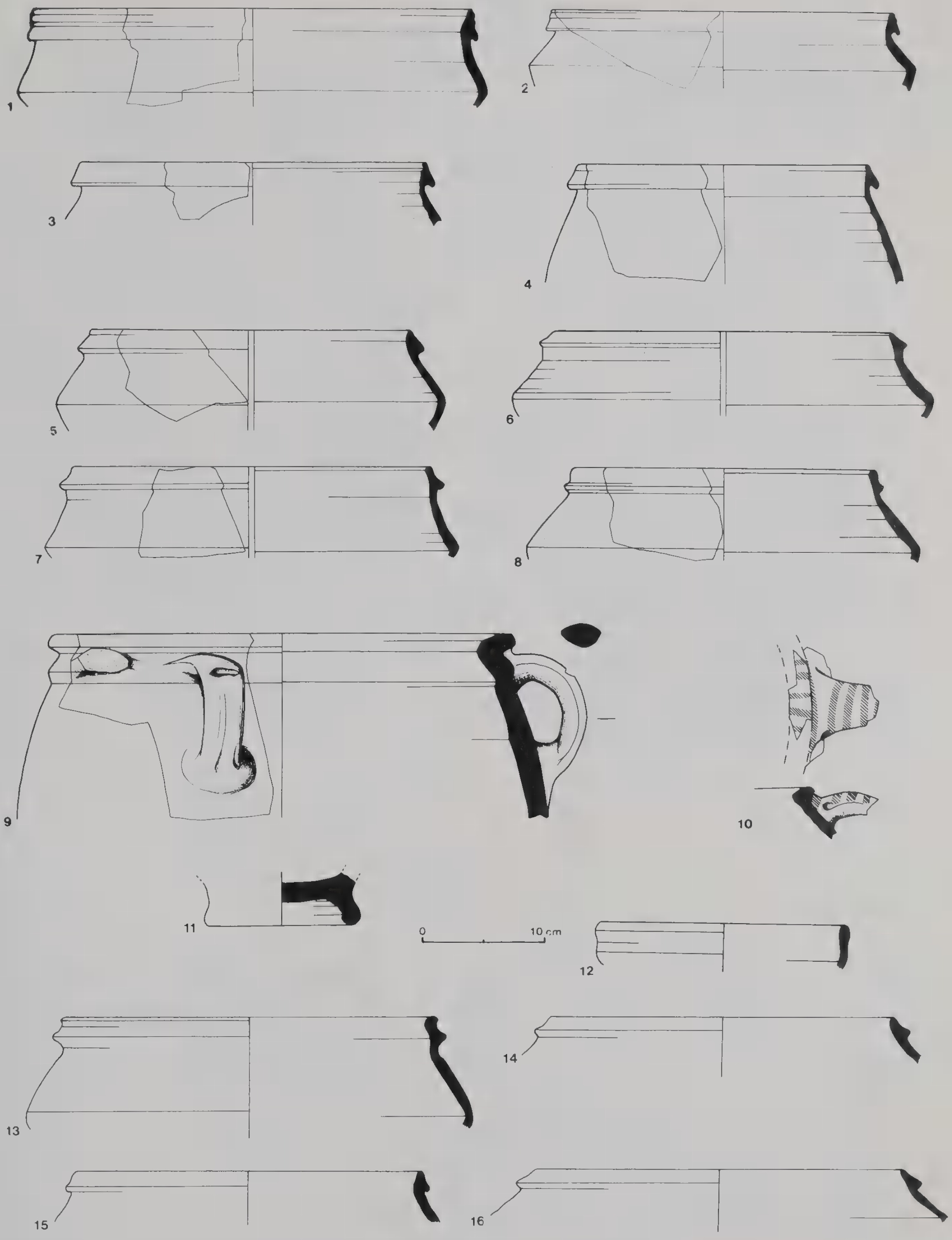
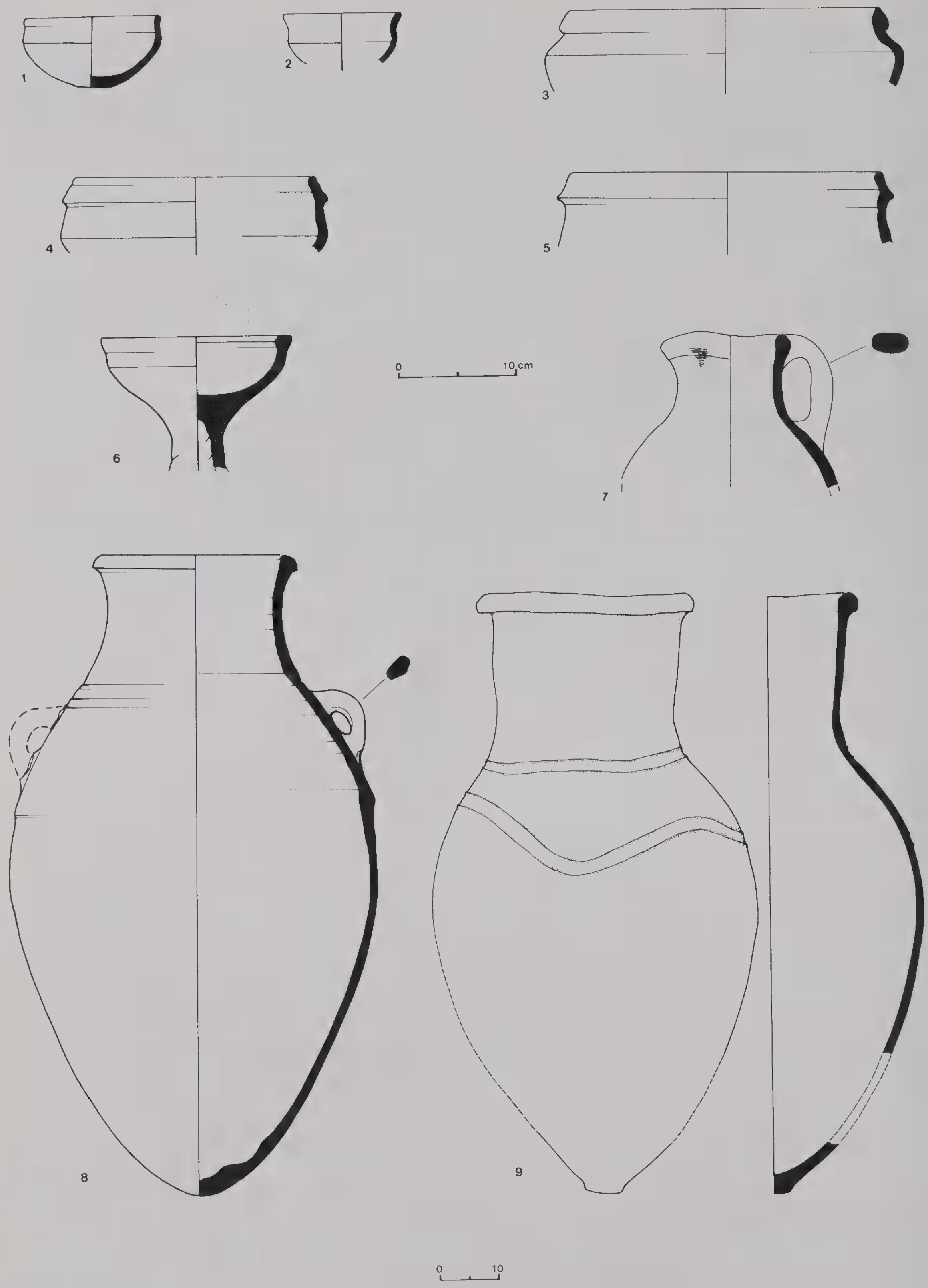


Fig. 4.6. Iron Age pottery from Stratum V. Cooking pots: 1, 3–7: L. 431; 2, 8: L. 432; 13–16: L. 1223; kraters: 9–11: L. 431; bowl: 12: L. 1223.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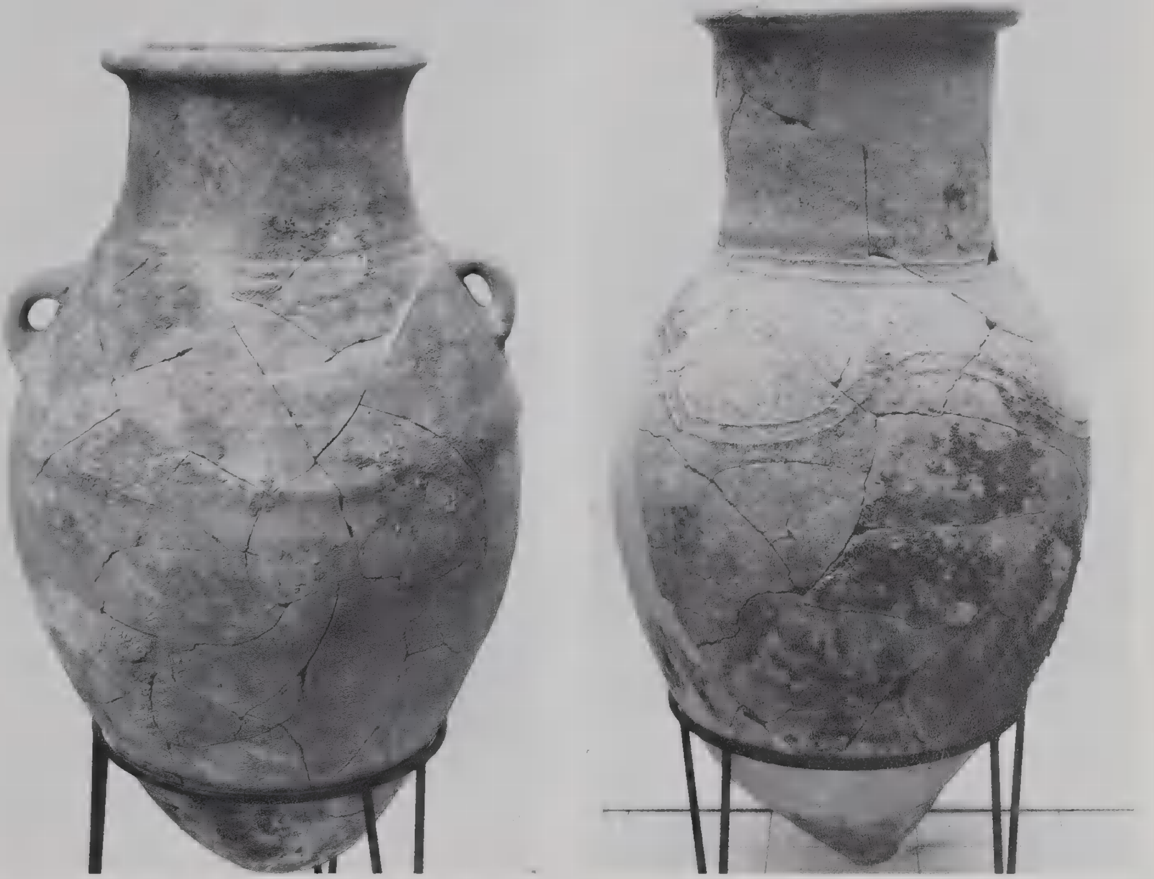


Fig. 4.7. Iron Age pottery from Stratum V, L. 586 (drawings, facing page): small bowls 1–2, krater 3, cooking pots 4–5, chalice 6, jug 7; "Galilean"-type pithos (L. 1212) 8, "Phoenician"-type pithos (L. 678) 9; (photographs): (above left) "Galilean"-type pithos (L. 1212) 10, (above right) "Phoenician"-type pithos (L. 678) 11.

The pit lining at the bottom is of large stones. Here the diameter is 0.90 m. At the lowest excavated level, immediately below the stones of the pit lining, were Late Bronze and Middle Bronze sherds.

Twelfth century material (fig. 4.19) was found in pit 1208 dug into the pebble layer belonging to our Stratum VII (see fig. 4.20 for the stratigraphic sequence). In the 1985 season, north of pit 1208, a complete krater was found in pit 4670 also dug into the pebble layer (fig. 4.18:11). An identical krater was found in 1975, in pit 1241 together with parts of three collared-rim jars and a large assemblage of Early Iron pottery (fig. 4.18:1–9). Pit 1241 was of special interest because it could be clearly associated with a floor (Locus 4609) on which similar Early Iron pottery was found (fig. 4.18:12–15).

Of great significance was Locus 4349, which was excavated in 1984. Located about 2 m west of pit 1225, Locus 4349 is also a pit. As it was neither stone-lined nor dug into the pebble layers, its exact countours could not be accurately determined (note the dotted lines in fig. 4.21). Nevertheless, there cannot be any doubt that it is indeed a pit. We estimate its depth to be 2.50 m and its diameter at the top to be 1.75 m. Pit 4349 was dug into earlier levels of occupation. The latest of these, the burnt layer 4338, contained two Late Bronze cooking pots, sherds of a carinated bowl, the handle of a Cypriot milk

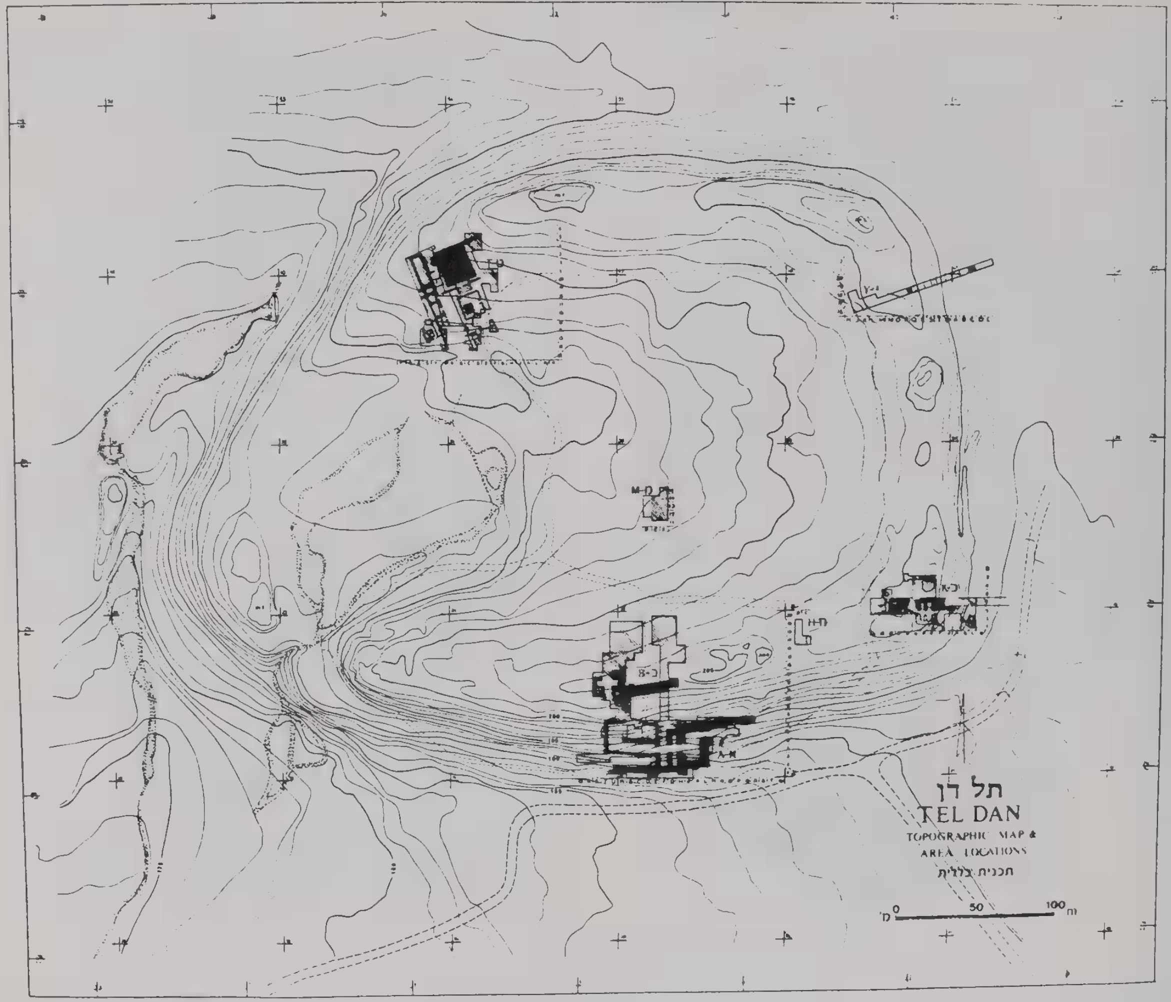


Fig. 4.8. Topographic map of Tel Dan, showing areas of excavation.

bowl, and the neck and rim of a Cypriot bilbil (fig. 4.17:1–6). Other Late Bronze broken vessels as well as MB IIC complete vessels were found in the lower strata of occupation through which pit 4349 was dug. The "surface" of large stones at the bottom of the pit later proved to be the slab-roof of an MB IIB tomb. What distinguishes pit 4349 from the others is the number of collared-rim jars. It contained the largest number yet found together in one pit—three complete and one almost-complete collared-rim jars (figs. 4.22, 4.23). Together with them was Early Iron pottery (fig. 4.24). Accordingly, we date the collared-rim jars to the beginning of the twelfth century B.C.

The pits described above were found in a relatively small excavated area (fig. 4.25). The concentration of these pits is remarkable and explains why so few Late Bronze remains were uncovered. The digging of pits in such density resulted in the destruction of the architectural remains from earlier strata, and this fact accounts for the scarcity of Late Bronze architectural remains. This phenomenon was not characteristic of Area B only. Similar density was observed in the excavations of the sacred precinct in Area T, although extensive work here was hampered by the monumental Iron Age II remains.

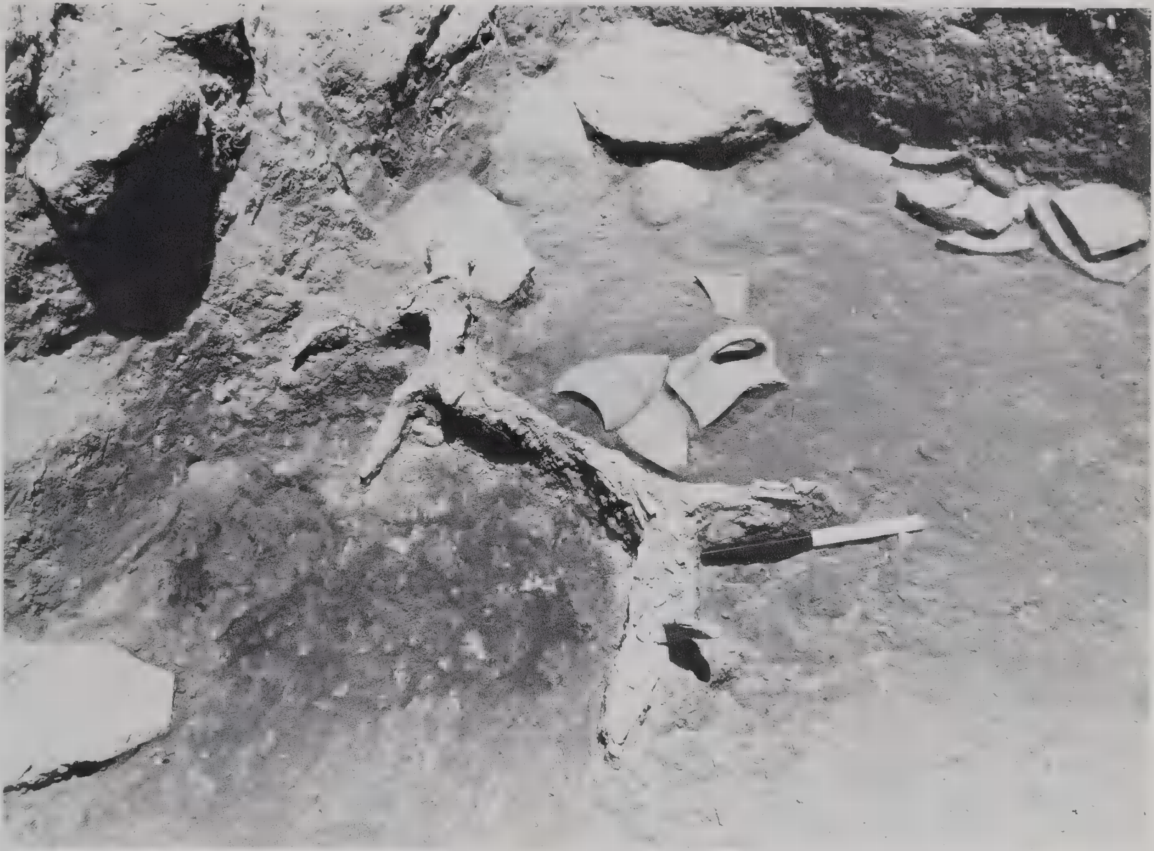


Fig. 4.9. Late Bronze floor: pottery and skeleton of Gazelle (Dana Mesopotamica) from L. 437.

The large number of pits dated to Early Iron at Dan is not unusual. At Hazor, the other large-scale excavation in this region, "the excavated areas were literally strewn with these pits" (Yadin 1972: 128). It should be emphasized that the beginning of the Iron Age at Dan (Stratum VI) is characterized primarily by the existence of pits. The typical vessels found in these pits are large pithoi, including collared-rim jars and cooking pots. The Mycenaean and Cypriot imports so well represented in Late Bronze Canaanite Laish disappear. No gap could be observed in the occupational history of Tel Dan during the transition from the Late Bronze Age to the Iron Age. The ceramic examination of Stratum VI leads to the conclusion that Stratum VI should be dated to the end of the thirteenth or beginning of the twelfth century B.C.

Does this transition from the Late Bronze to Early Iron also signify a change in the population? If so, can we identify those responsible for Stratum VI at Dan, with its pits and collared-rim jars? It seems inconceivable to me that the same people who enjoyed the highly developed material culture of the Late Bronze urban civilization would suddenly revert to a life-style that can only be characterized as semi-nomadic, with people dwelling in huts or tents and storing food in large jars deposited in pits or silos. I cannot envisage the Canaanites of Laish of the Late Bronze Age to be these people. Who, then, were they?

The answer is to be found in Judges 18, which gives us a detailed account of a tribe in search of a territory for settlement. Six hundred armed men of the family of Dan go forth from Zorah and

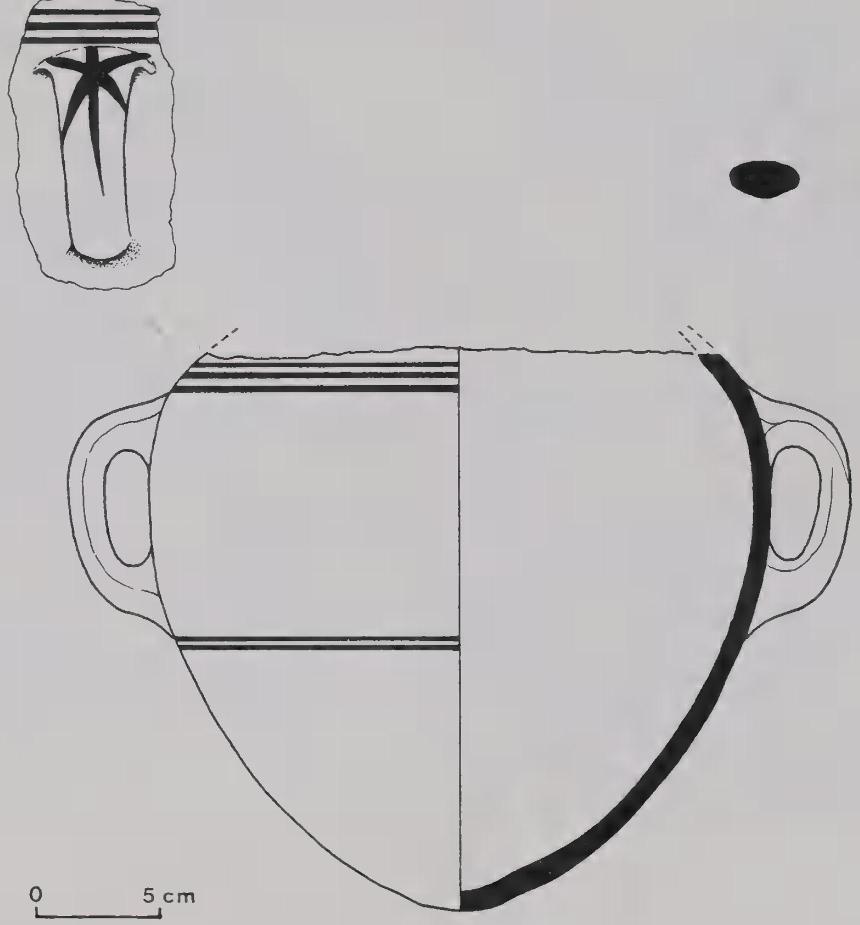


Fig. 4.10. Late Bronze vessel from L. 437.

Eshtaol. They stop at Kiryat-Yearim near Jerusalem. The term used for them is "camp of Dan," which seems to point to their nomadic or semi-nomadic character. From Kiryat-Yearim they continue to the hill-country of Benjamin and Ephraim. With children, cattle, and sheep (another indication of their nomadic nature), they proceed northward, perhaps along the hill-country, or perhaps through the Jordan Valley of Gilead and Bashan further east. After conquering Laish, they establish themselves in their new locality, calling it Dan. The material culture of Stratum VI brought to light in the excavations of Tel Dan, so radically different from the strata preceeding it, represents in our view the first stage of the occupation of the site by the tribe of Dan (see also Malamat 1971).

No doubt the new settlers absorbed the culture of their Canaanite predecessors. To that influence may be ascribed the "Galilean"-type pithos whose antecedents were found at Dan (fig. 4.17:7) in the debris of Late Bronze Laish (Stratum VII, in Area T). This type of pithos is common in Canaanite Hazor (Stratum XIV and XIII). Canaanite influence may be seen in the cooking pots and other vessels found in Stratum VI at Dan. The collared-rim jars found in Stratum VI at Tel Dan, however, are not derived from any previous tradition. Their origin is to be sought elsewhere.

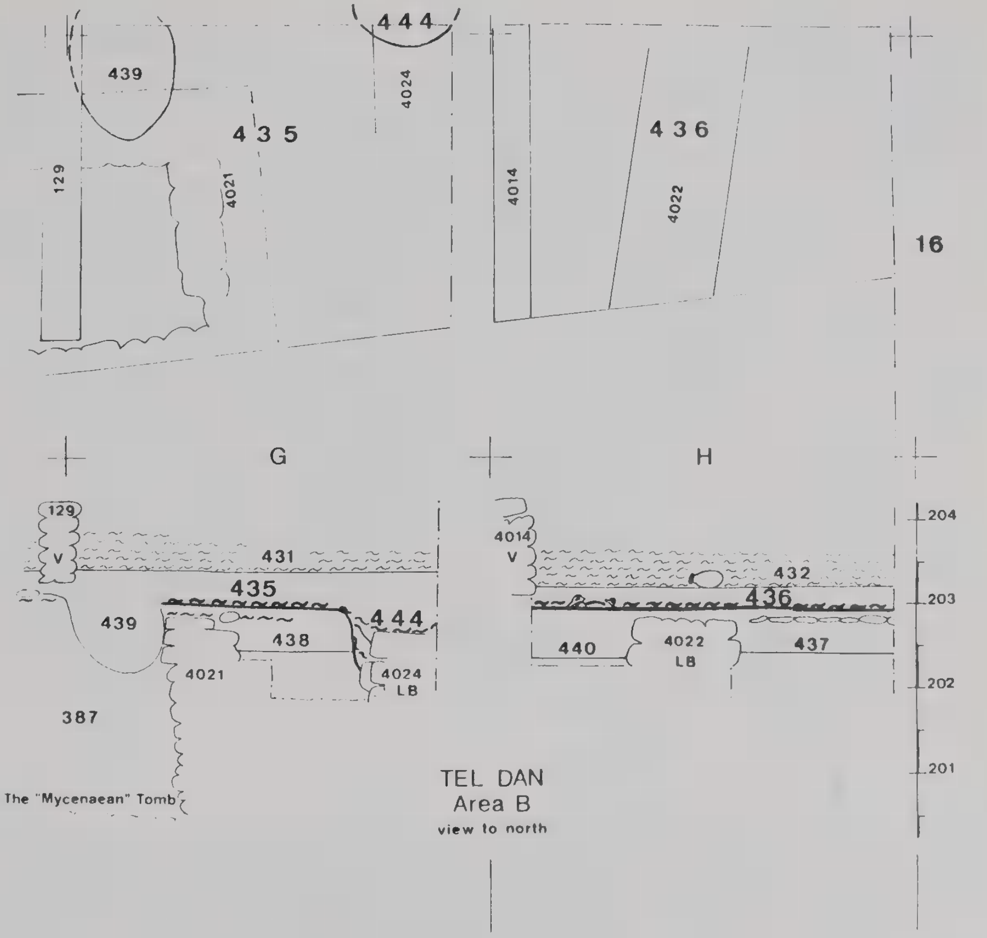


Fig. 4.11. Section showing transition from Late Bronze (Stratum VII, Loci 438, 440, 437) to early Iron (Stratum VI, Loci 435, 436, 444 and Stratum V, 431, 432).

The largest concentration of collared-rim jars has been found in the central hill-country at Shiloh, Ai, Bethel, Tell el-Ful, Giloh, and Izbet Sartah, among other places. The tribe of Dan, traveling through the hill-country, would be influenced by exposure to this novel type of storage jar design. They may have already used it at Zorah and Eshtaol before their migration. Collared-rim jars were found at Beth-Shemesh, for example, a short distance away (Grant and Wright 1936: pls. XL and LXI; 1939: 129).

Whether or not the origins of the collared-rim jar in general are to be sought in a Canaanite prototype as maintained by some scholars, the fact remains that it does not appear so far in any Late Bronze strata of Canaanite Laish. Only following the destruction of Stratum VII, at the end of the thirteenth century B.C., does the collared-rim jar make its appearance at Tel Dan around 1200 B.C., the beginning of the Iron Age. That it was an innovation introduced by the tribe of Dan seems to me an inescapable conclusion. The migration of the tribe of Dan would thus have taken place toward the end of the thirteenth or beginning of the twelfth centuries B.C.

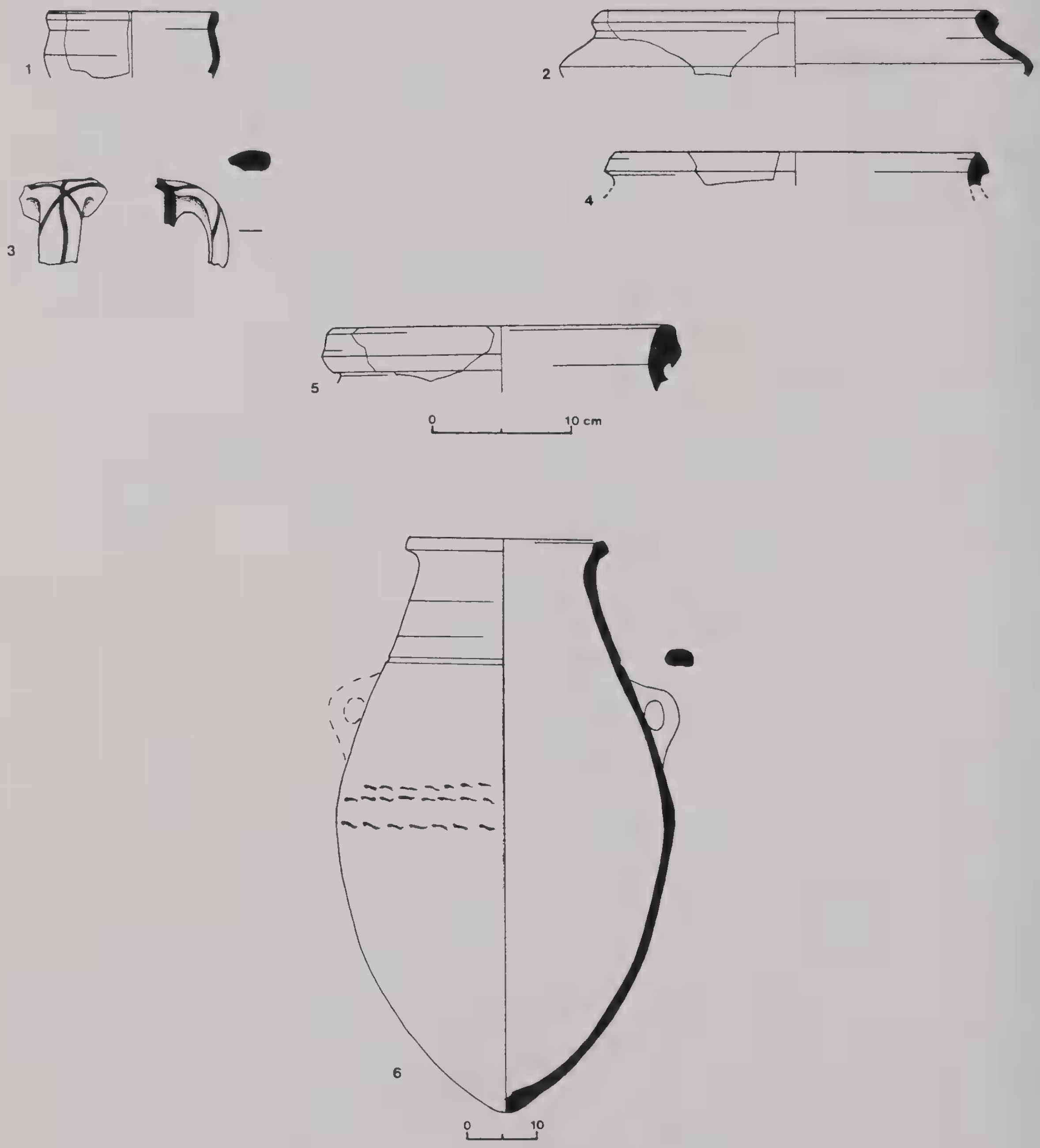


Fig. 4.12. Pottery from Stratum VI L. 435: small bowl 1, krater 2, jar handle 3, cooking pot 4, collared-rim 5, "Galilean"-type pithos 6 (L. 444).

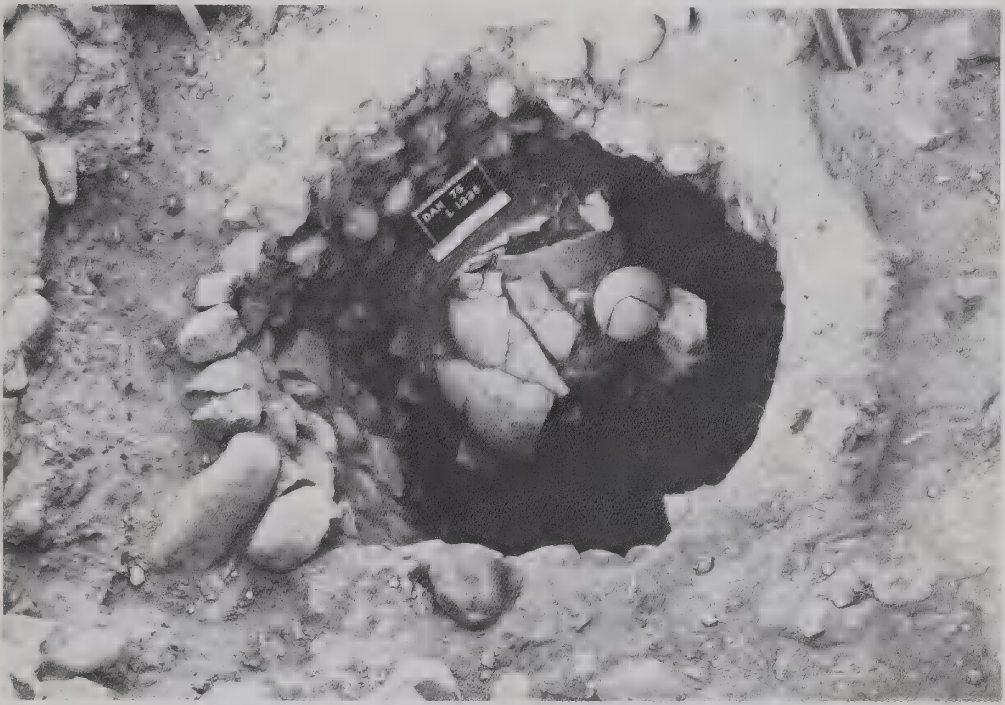


Fig. 4.13. Stone-lined pit 1225, Stratum VI.

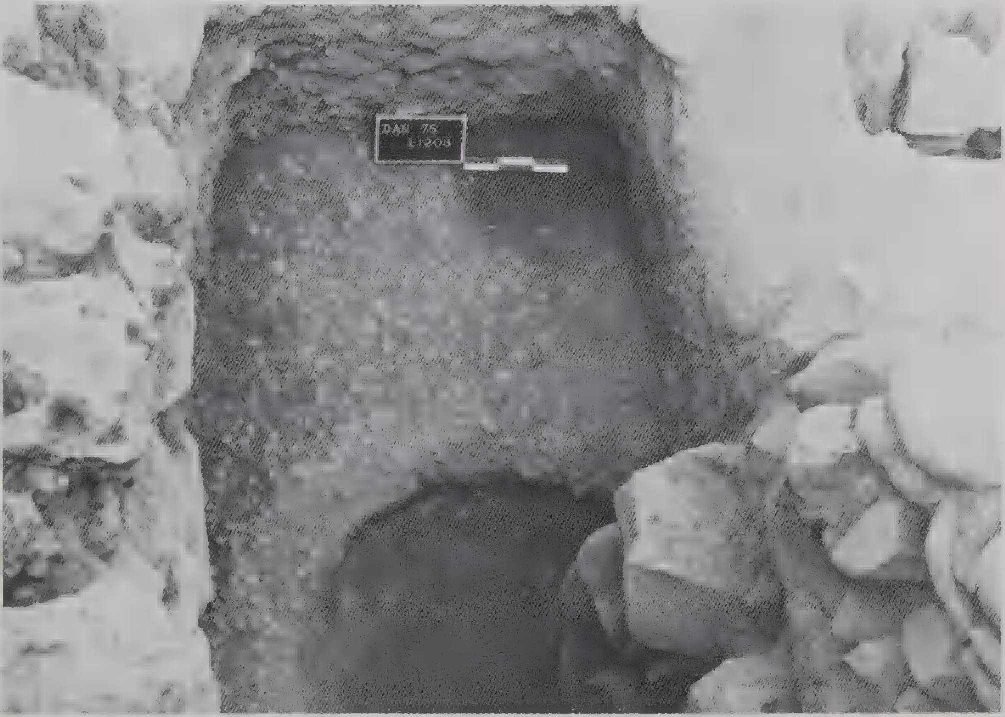


Fig. 4.14. Stratum VI pits dug into pebble layer Stratum VII.

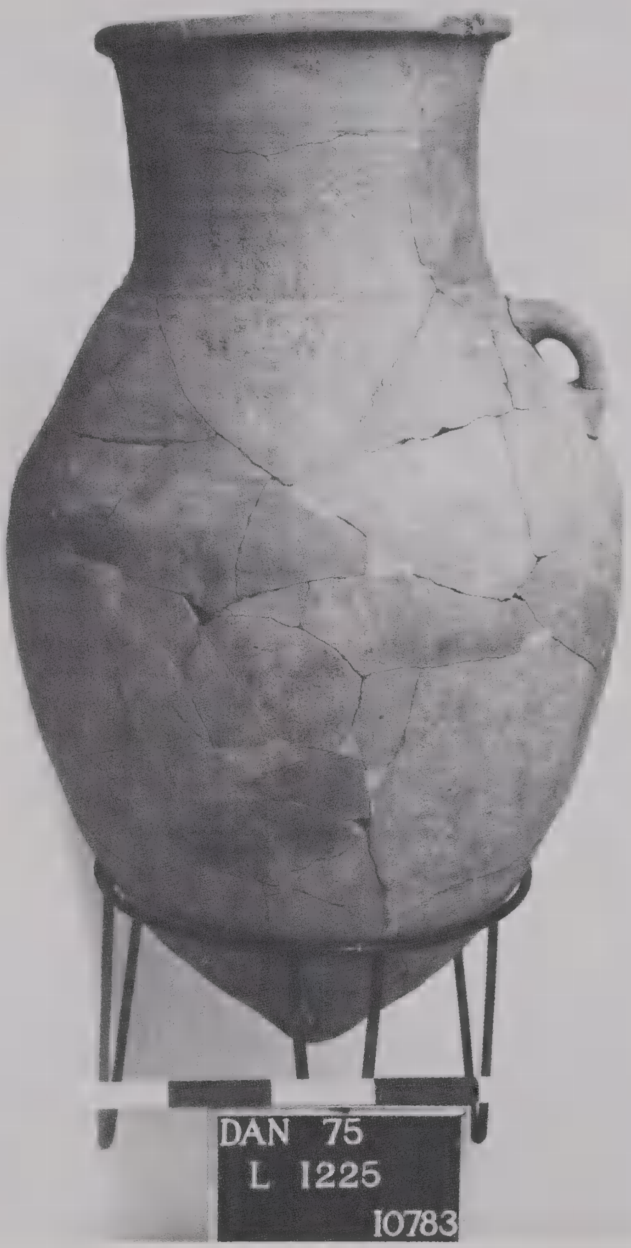


Fig. 4.15. "Galilean"-type pithos from L. 1225, Stratum VI.

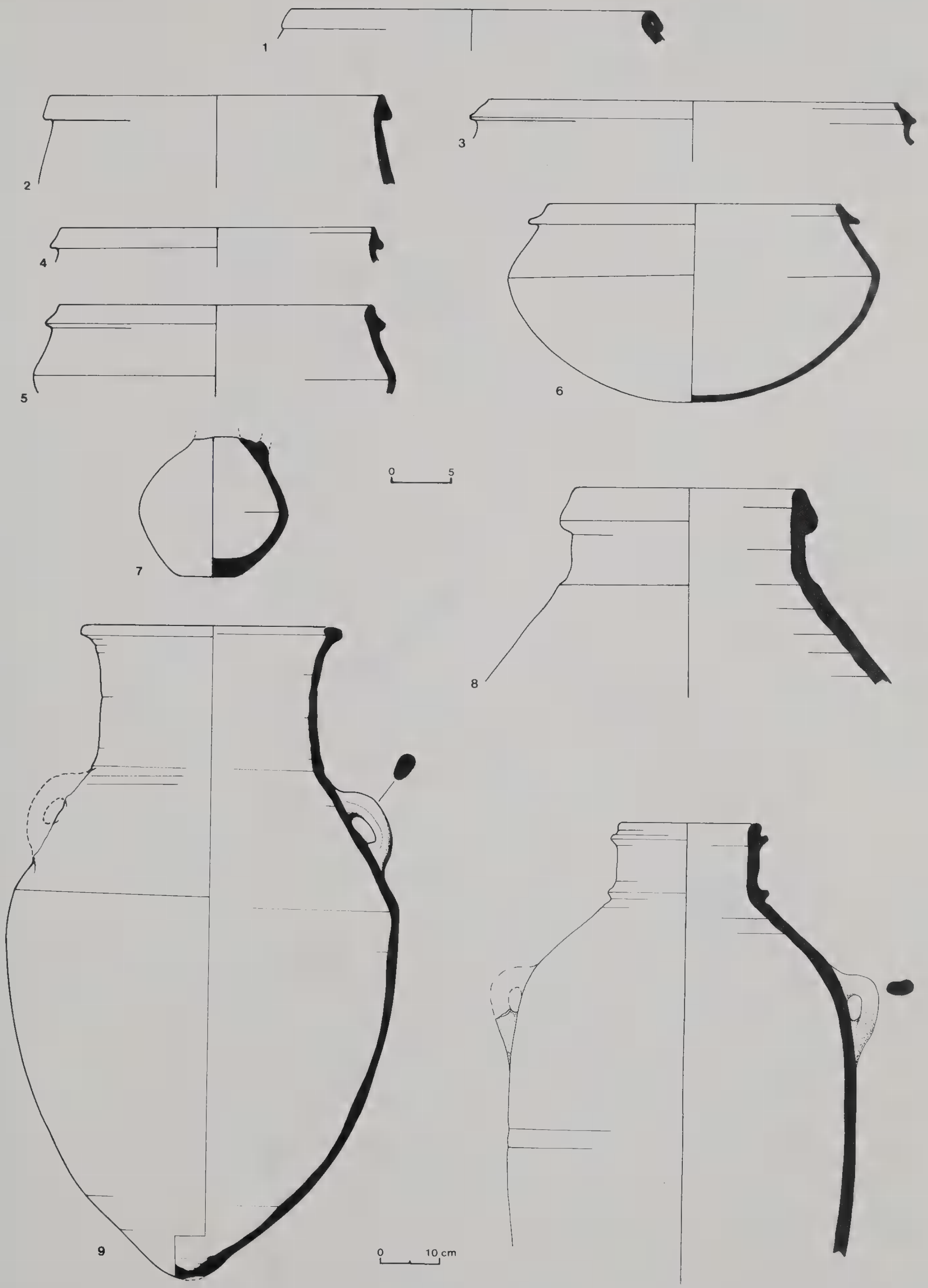


Fig. 4.16. Pottery from pit 1225, Stratum VI: krater 1, cooking pots 2–6, jug 7, collared-rim 8, "Galilean"-type pithos 9, pithos 10.

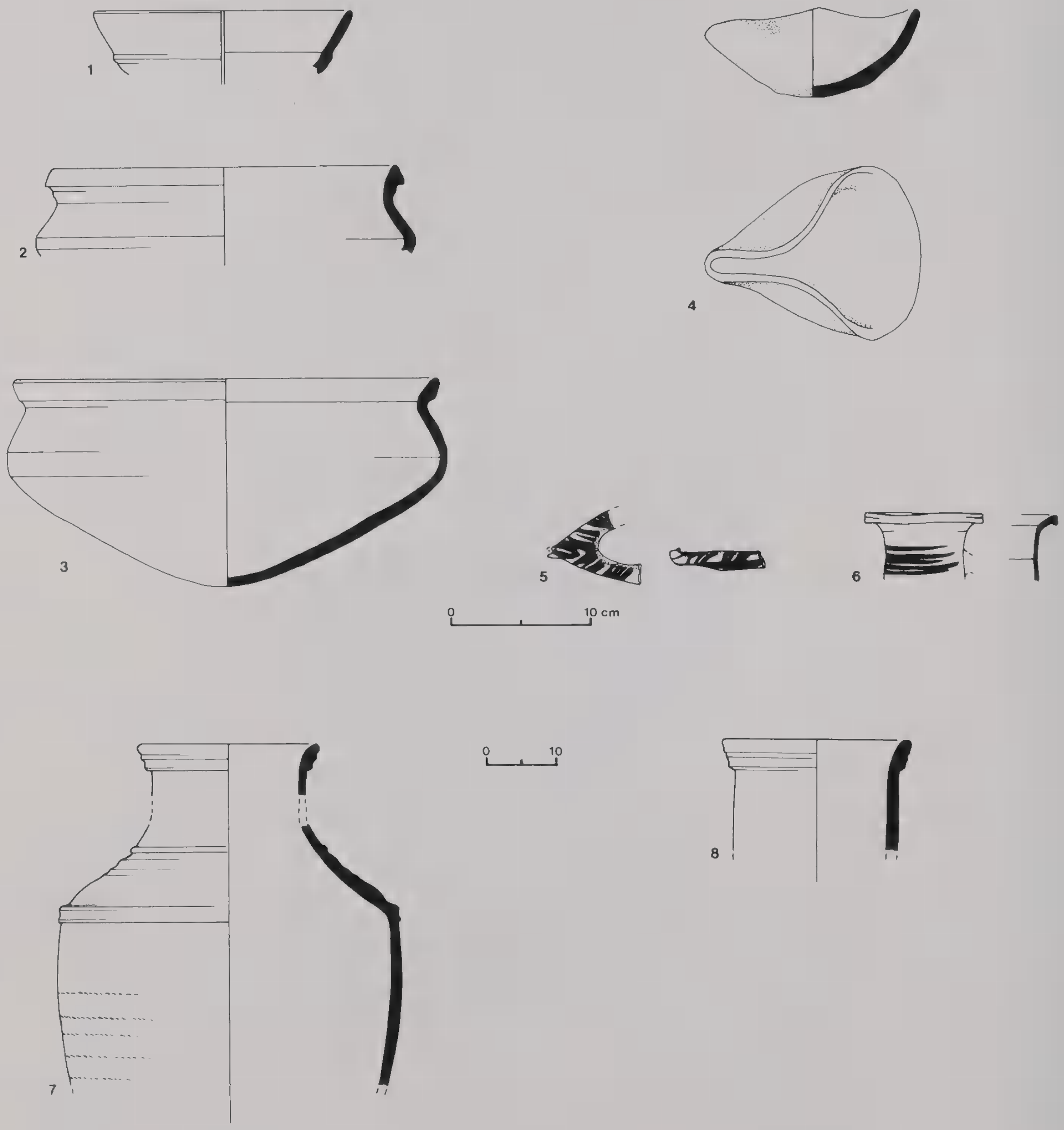


Fig. 4.17. Late Bronze pottery from Stratum VII. L. 4338: Carinated bowl 1, cooking pots 2–3, oil lamp 4, Cypriot milk bowl 5, Cypriot bilbil 6. "Hazor"-type pithoi 7 (L. 2763) and 8 (L. 2842).

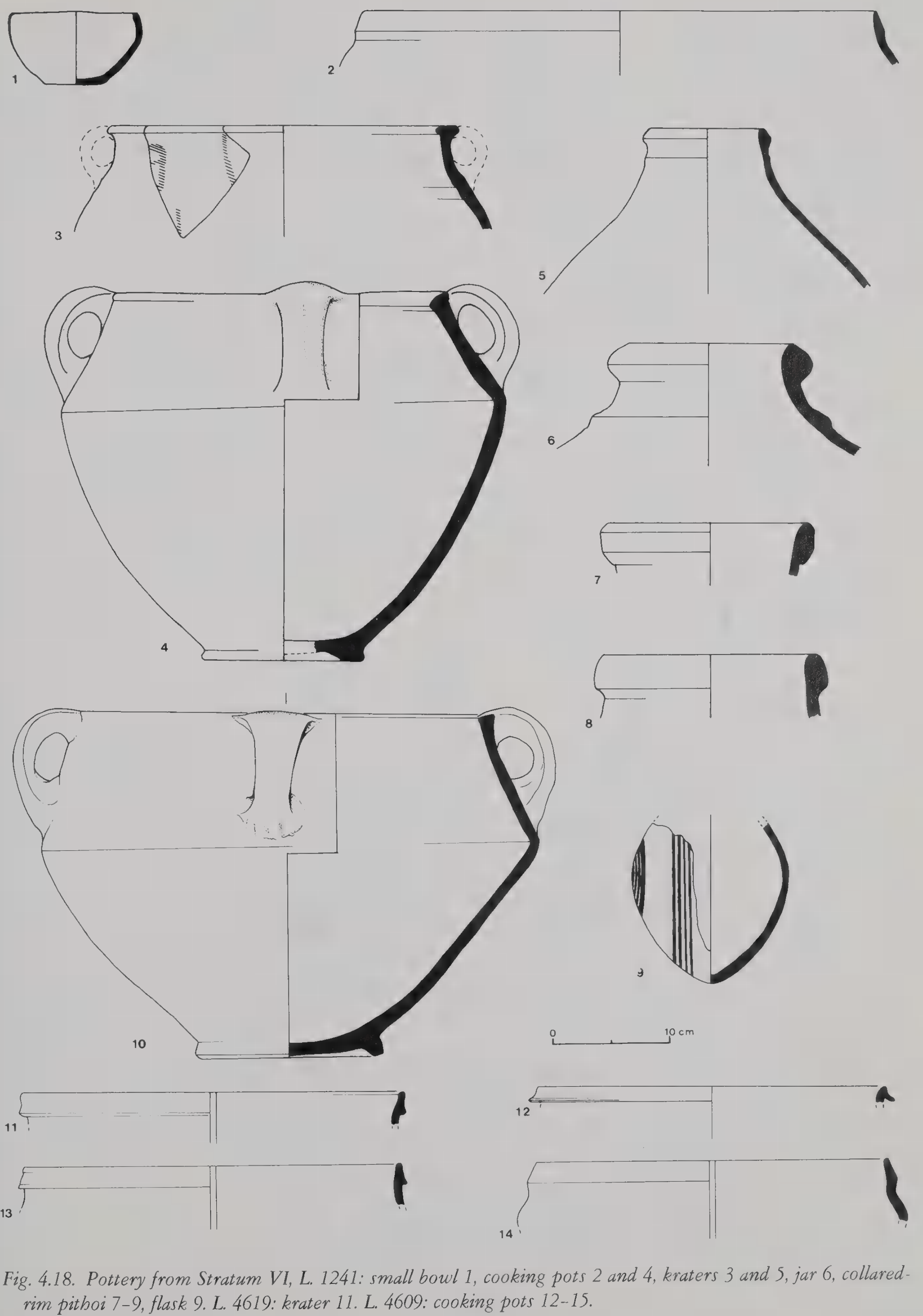


Fig. 4.18. Pottery from Stratum VI, L. 1241: small bowl 1, cooking pots 2 and 4, kraters 3 and 5, jar 6, collared-rim pithoi 7–9, flask 9. L. 4619: krater 11. L. 4609: cooking pots 12–15.

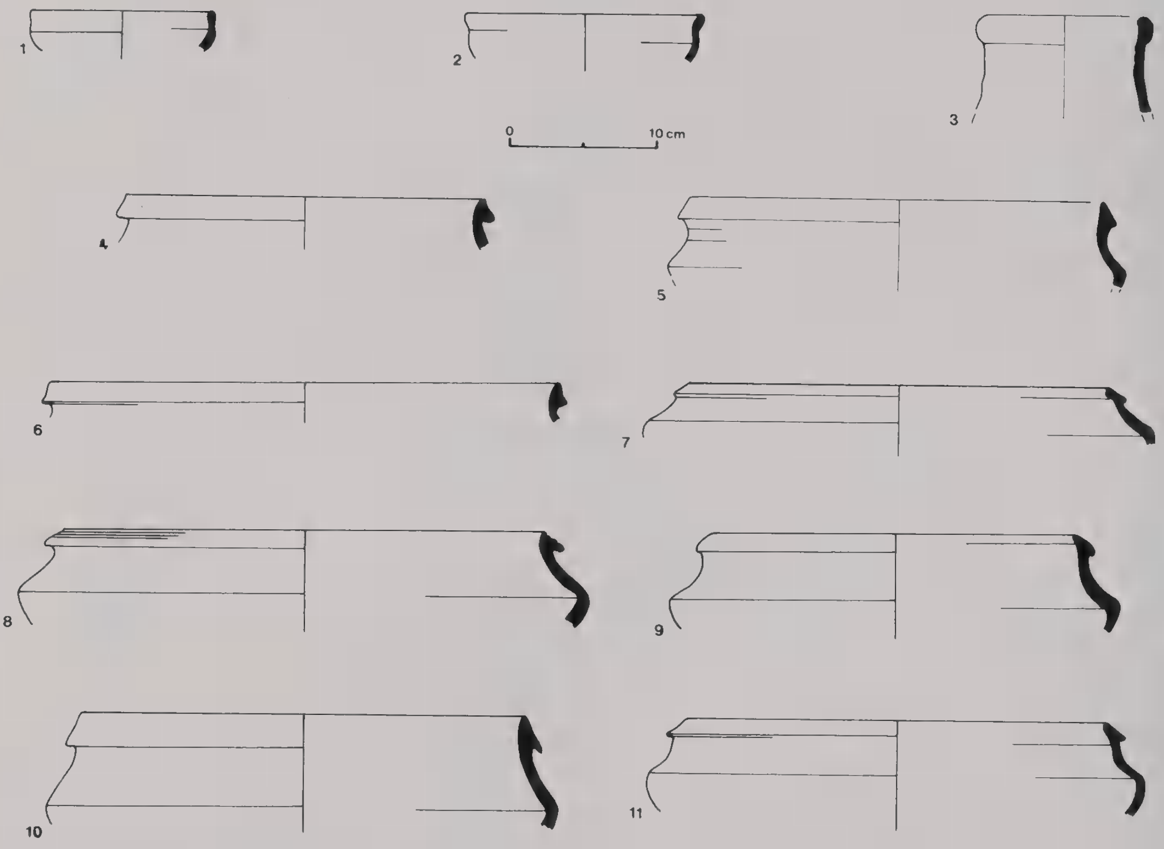


Fig. 4.19. Pottery from Stratum VI, L. 1208: small bowls 1–2, jar 3, cooking pots 4–10.

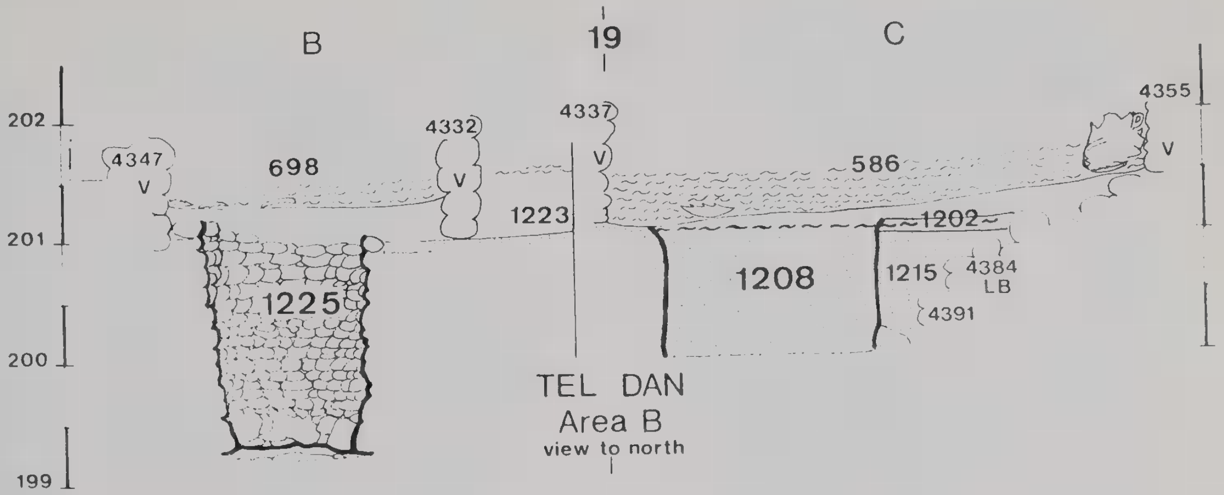
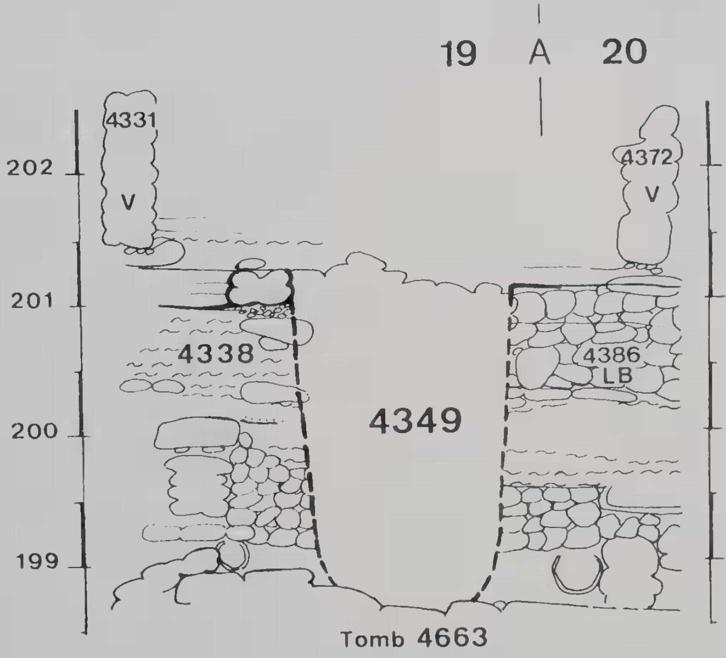


Fig. 4.20. Section showing pits 1225 and 1208, Stratum VI and Loci 698 and 586, Stratum V.



TEL DAN
Area B
view to west

Fig. 4.21. Section showing pit 4349, Stratum VI.

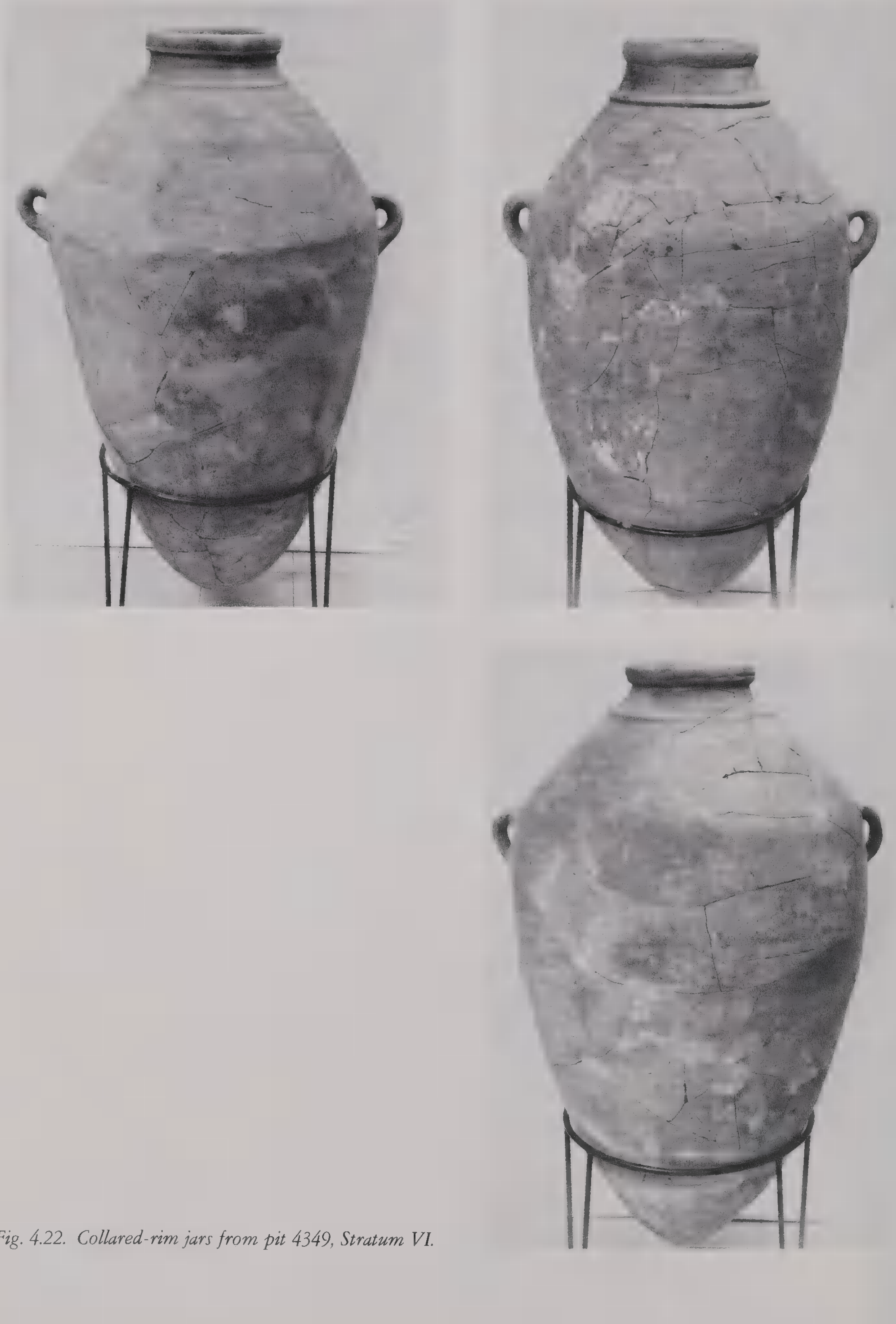


Fig. 4.22. Collared-rim jars from pit 4349, Stratum VI.

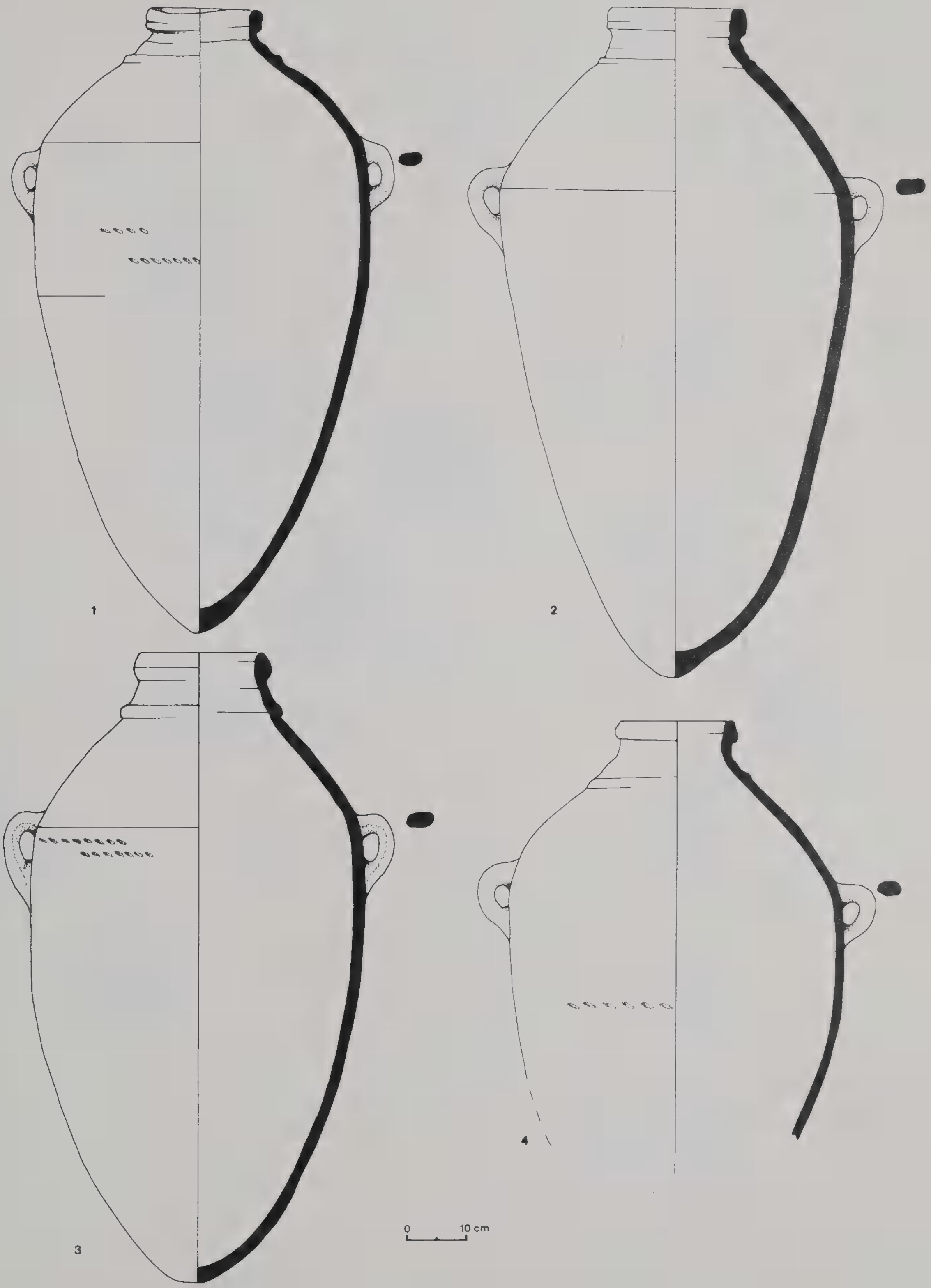


Fig. 4.23. Drawing of collared-rim jars from pit 4349, Stratum VI.

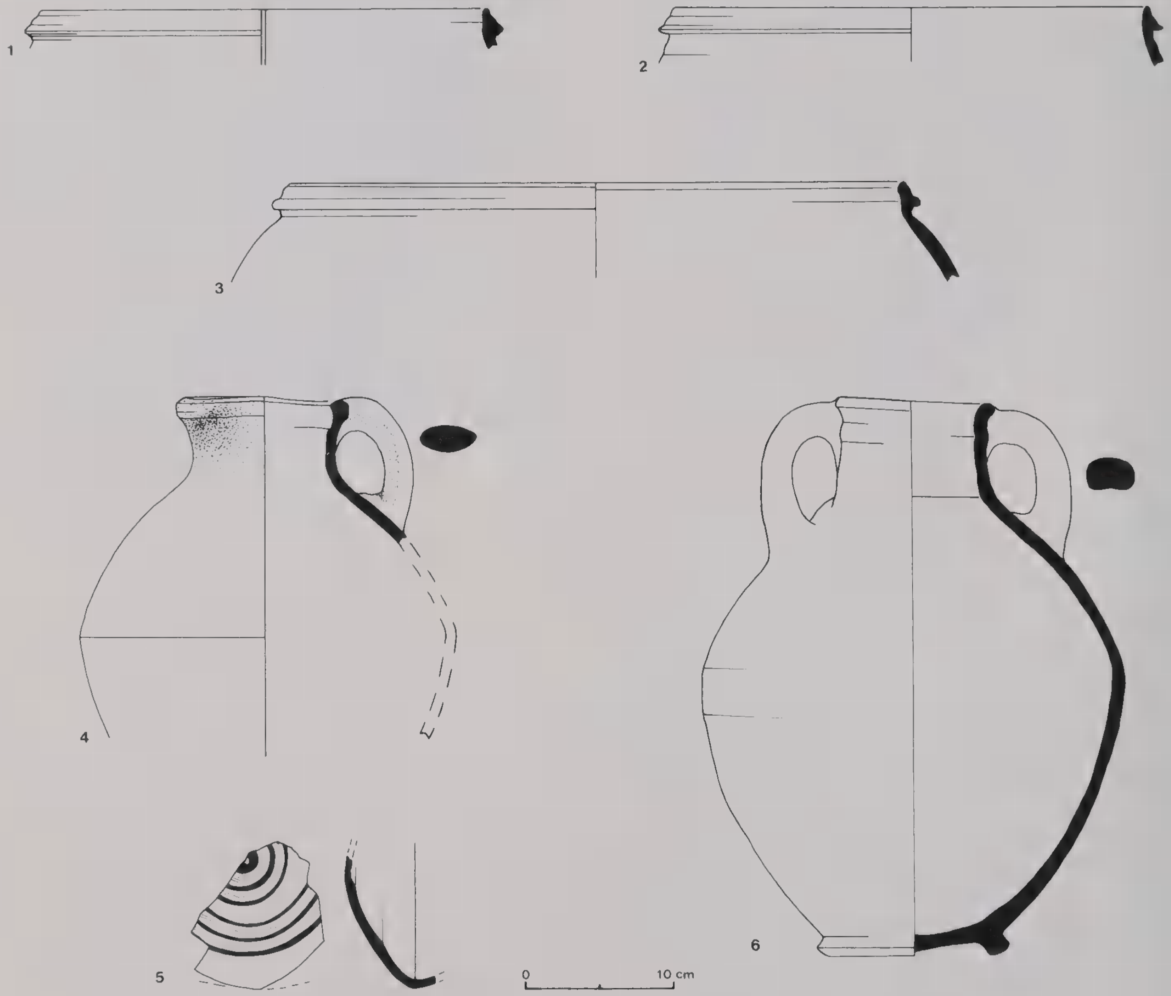


Fig. 4.24. Early Iron pottery from pit 4349; cooking pots 1–3, jug 4, flask 5, jar 6.

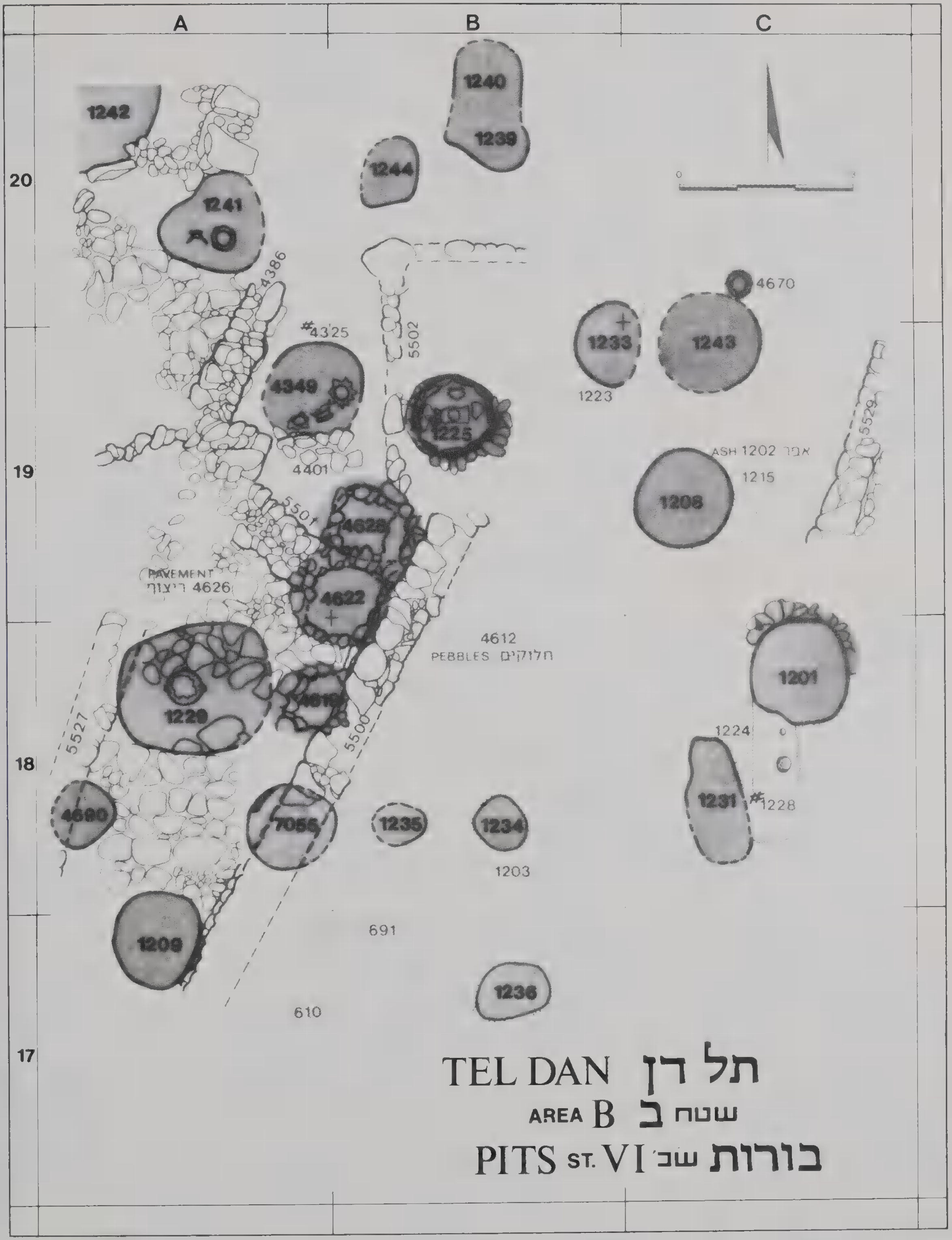


Fig. 4.25. Plan showing pits of Stratum VI.

Notes

[1] The excavations of Tel Dan began in 1966 as a rescue excavation by the Israel Department of Antiquities and Museums under the direction of the writer. It subsequently developed into a full-fledged expedition, and since 1974 has been the major archaeological enterprise of the Nelson Glueck School of Biblical Archaeology of Hebrew Union College-Jewish Institute of Religion. The drawings of pottery vessels and the photographs appearing in this article are used by courtesy of the Israel Department of Antiquities and Museums and the Hebrew Union College-Jewish Institute of Religion.

[2] In 1970–75 the supervisor in this area was Y. Porat, and the surveyors M. Feist, Y. Minsker, and Gila Cook. The final plans appearing in this article are by Gila Cook.

[3] The ceramic analysis is based on the research of Dalia Packman.

[4] In 1984 and 1985 the supervisor in this area was Nancy Heidebrecht. The surveyor was Gila Cook.

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Judah and Jerusalem in the Eighth-Sixth Centuries B.C.E.

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Recent excavations in Judah have enriched our knowledge of the Iron Age II period, especially the eighth to sixth centuries B.C.E. Strata 12–10 from the City of David Excavations have provided important groups of stratified pottery that are well identified typologically.

Solid archaeological correlations can now be made between City of David Strata 12–10 and Lachish Strata III–II. In addition, important documentary evidence from the Bible and other written sources can be brought to bear on the history and chronology of the building periods and destruction phases of these two sites. Such information enhances the interpretation of the archaeological evidence.

The combination of archaeological material from City of David Strata 12–10 and Lachish Strata, III–II and of data from historical sources creates a sound, up-to-date model. This model provides greatly improved standards for the dating and evaluation of finds from other Judean sites of the eighth to sixth centuries B.C.E.

In this paper we present a summary of the new data from the eighth-sixth centuries B.C.E. obtained from the excavations in the City of David in Jerusalem. The discussion will be based on the finds and conclusions from the excavations, which together with the ongoing research at other Judean sites will serve as the starting point for an up-to-date overview of the development of the material culture of Judah during the late phase of the Iron Age.

This period is rich in historical information from literary sources, both the Bible and the Assyrian and Babylonian sources. This abundance of historical data presents the modern archaeologist with an obvious challenge—the formation of the best possible correlation between the historical data and the rich finds from numerous excavations. The various sites include settlements of all types distributed throughout Judah, the Shephelah, and the Coast: large centers such as the capital, Jerusalem, the royal center of Lachish, and the fortress at Ramat Rahel; provincial towns such as Beit Shemesh, Tell Beit Mirsim, Gibeon, and Tell en-Nasbeh; villages and agricultural settlements throughout Judah; settlements and fortresses in the Beersheba valley such as Arad, Beersheba, Aro^{c}er, Tel Ira, Hurvat Uza, Tell Masos; as far as Ein Gedi in the Judean desert; and Kadesh Barnea on the northern border of Sinai. The area of research has recently been extended to the western edge of Judah, to the Shephelah, with the excavations at Gezer, Tel Batash, and Miqne, sites that connect the Judaean sites with those of the coast, such as Ashdod and Ashkelon (fig. 5.1). A detailed stratigraphic sequence, details of urban planning, a wealth of plans of public buildings and fortifications, residential and industrial structures, rich ceramic finds, and inscriptions—all these permit, and indeed today necessitate, the construction of a better-organized and more up-to-date model of the material culture of Judah in the eighth-sixth centuries B.C.E.

There is no parallel to the range of urban development known from Jerusalem in the tenth-sixth centuries at any other Iron Age site in the kingdoms of Israel and Judah. It is sufficient to mention that

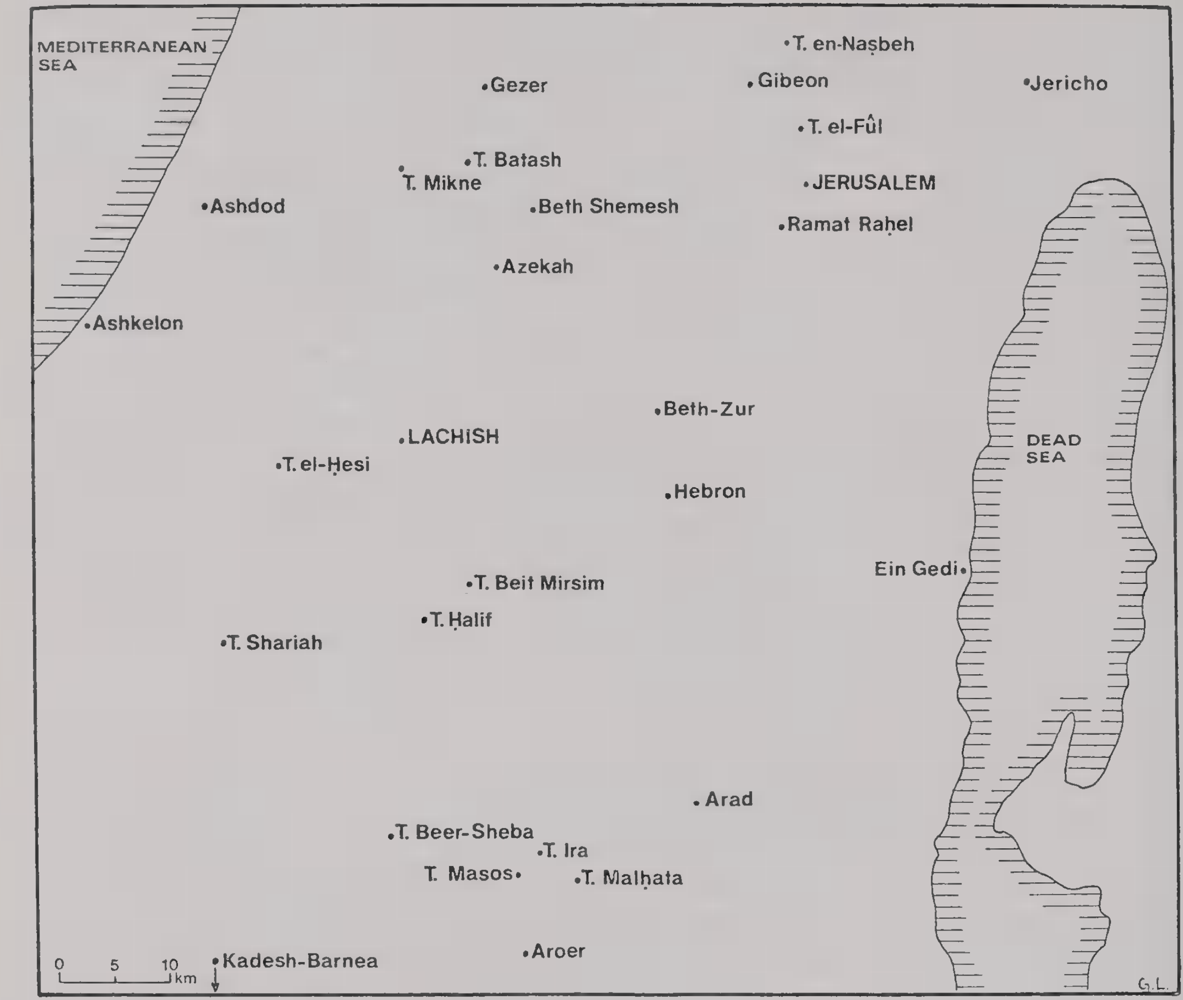

Fig. 5.1. Map of sites in Judah.

Lachish, the site that is the second largest in area in Judah, reached a size of about 75 dunams in the Iron Age. The area of Canaanite Jerusalem was about 60 dunams (fig. 5.2). The expansion of the acropolis area to the north and the construction of the royal complex in this area in the tenth century B.C.E. may have enlarged the new city area to ca. 160 dunams (fig. 5.3). By the time of Hezekiah, at the end of the eighth century B.C.E., the fortified area of the city covered about 600 dunams (fig. 5.4), an area about ten times bigger than the city conquered by David! This fortified area was very densely populated from Hezekiah's reign onward. Many indications of this have been found in the different excavations carried out in the old city of Jerusalem, and particularly in the City of David, where the remains from this period were undisturbed by later buildings. In common with every large city, Jerusalem possessed suburbs outside her walls, mainly to the north, such as "Go^{c}ah," "Giv^{c}at Garav," and "Geva^{c}ot," which are mentioned in Jer 31:38–39 and Zeph 1:10. These suburbs considerably increased the actual area of the city and the size of its population. It can be assumed that the population of the city and its outskirts at this time was between 25,000 and 40,000 inhabitants.

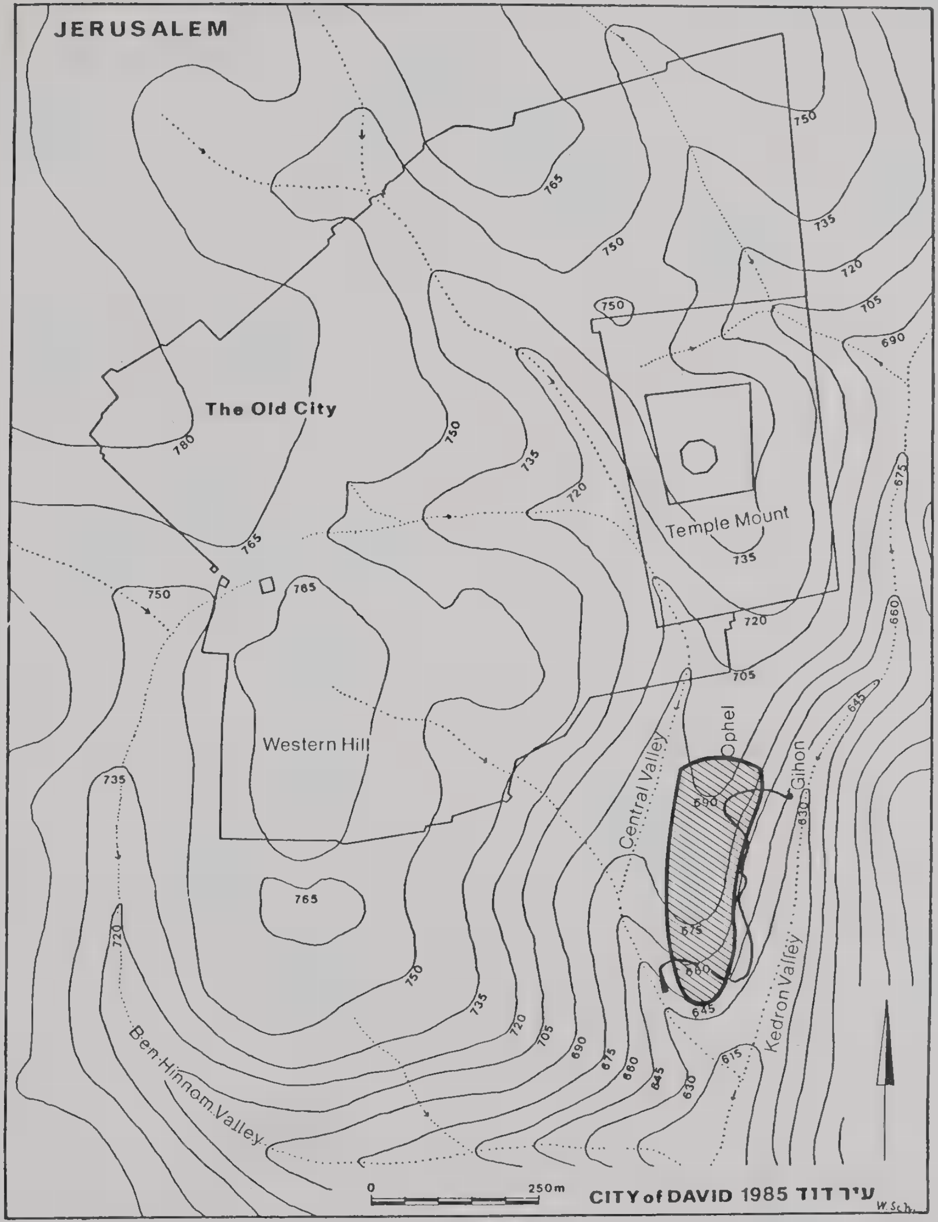

Fig. 5.2. Plan of Canaanite Jerusalem.

Today, we are also much more familiar with city and town planning and its various components. The acropolis was located at the top of the hill of the City of David, on its northern part. The administrative area of the acropolis was situated between the Temple to the north and the Lower City, which extended over the southern part of the City of David hill. In the acropolis administrative area was the citadel, which may be identified with the "Ophel" mentioned several times in the Bible. The western hill served mainly as the new residential quarter of the city at this time. The growth of the

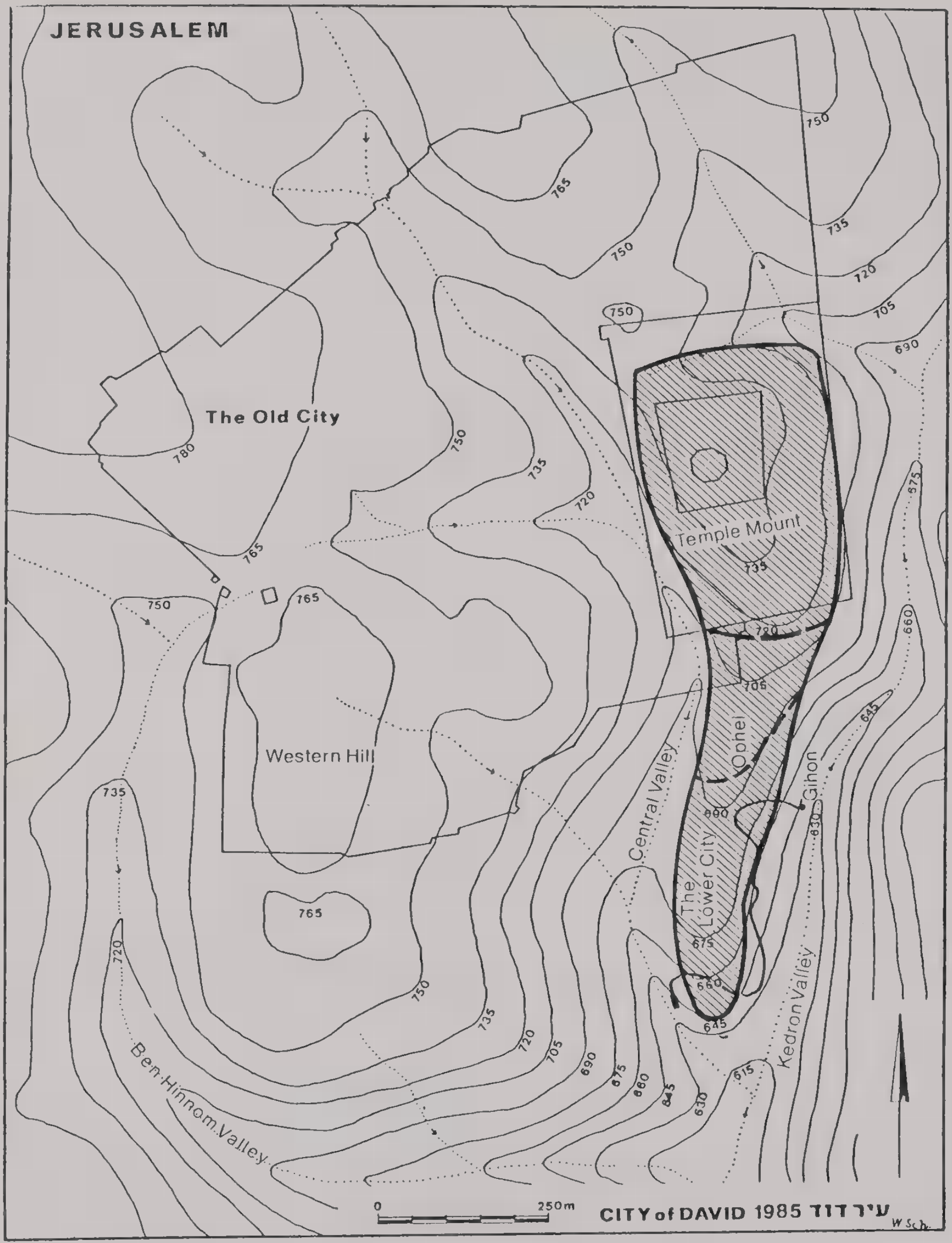

Fig. 5.3. Plan of Jerusalem in the 10th–9th centuries B.C.E.

new suburbs outside and to the north of the fortified area during the seventh century B.C.E. is evidence of the continued prosperity of the city up to its destruction at the hands of the Babylonians.

This period was very carefully investigated in the City of David. Three strata (Strata 12-11-10) have been distinguished from this time. In Stratum 12, which we have attributed to the eighth century B.C.E., we found that the fortification system and its associated structures were rebuilt on the eastern slope of the City of David. These details fit with the broader picture of the construction of fortifications surrounding the western hill that emerges from Avigad's excavations on the western hill. We also assume that this building activity should be linked to the detailed biblical account that describes

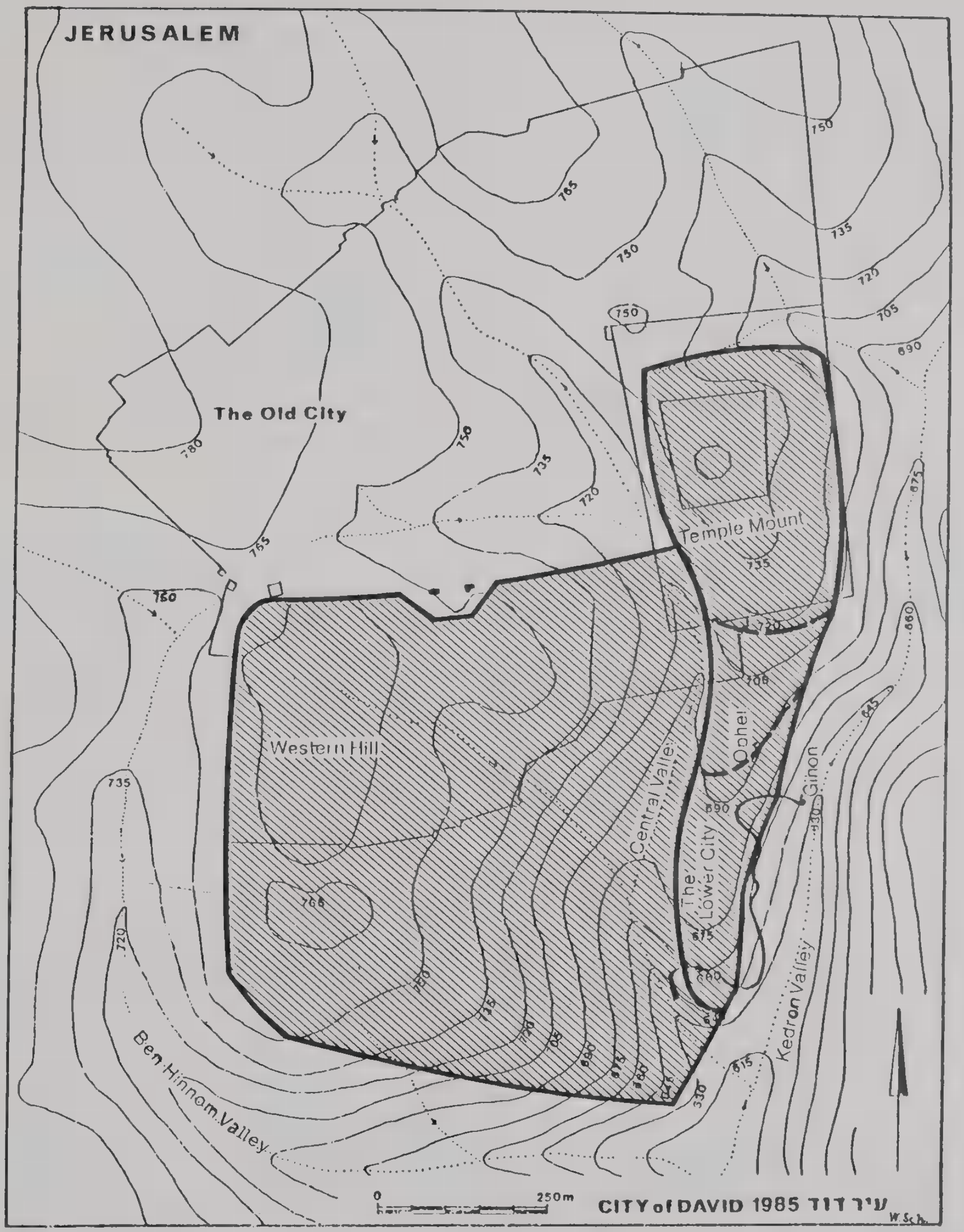

Fig. 5.4. Plan of Jerusalem in the 8th–6th centuries B.C.E.

Hezekiah's activities in Jerusalem during the last quarter of the eighth century B.C.E. (Isa 22:9–11; 2 Chr 32:3–5, 30).

During the formation of Stratum 11, and mainly Stratum 10, from the seventh century B.C.E. on, the process of building on the eastern slope of the City of David continued. In Stratum 10, we can discern the additional construction of large buildings in Area E and especially in Area G.

How do we now connect this stratigraphic and chronological sequence with the historical events reflected in the building and destruction phases in Judah? It seems today, in the light of what is known from the excavations at the City of David and at Lachish, that we will have to rely first of all on the chronological-historical-archaeological correlation that can be made between these two sites: first, by the internal relative sequence at each site, and second, by comparison between them. This method, based on the corresponding data from these two important sites, is much more firmly grounded than if we were to rely on one site alone. In contrast to the meager historical information available from other sites in Judah and the Shephelah, there is no doubt as to the clear historical documentation of Jerusalem and Lachish—their identity, dates, and the various main historical events that occurred there. We shall mention here only the most important and obvious of these features: the building and fortification activities in the reign of Hezekiah in the last quarter of the eighth century B.C.E.; the reorganization of the kingdom of Josiah (639–609 B.C.E.); and the almost total destruction of the towns of the Judaean kingdom in 586 B.C.E. Archaeological and historical research now shows that Nebuchadnezzar's first campaign in 597 B.C.E. principally affected only the king, his court, and the administrative framework, together with the upper classes of Judah and Jerusalem. In any case, it is probable that when Jerusalem surrendered to the Babylonians, it was not physically destroyed during this campaign.

The most dramatic and obvious turning point is the destruction of the First Temple and the city: traces of this destruction have been found in each of the excavations carried out in Jerusalem, and particularly in Stratum 10 in Areas E and G of the City of David. Corresponding strata bearing identical traces of destruction have been discovered in Judah at Lachish II, Ramat Rahel V, Ein Gedi V, Arad VI, Tell Beit Mirsim A3, Aro^{c}er II, Ira VI, Malhatta, Masos, and Kadesh Barnea (fig. 5.5). The excavators of Tel Batash II, Miqne, and Tell esh-Shari^{c}a are not certain of the cause of destruction of these cities. They pose the possibility that they were destroyed in one of the earliest Babylonian campaigns carried out in the coastal strip rather than in the 586 B.C.E. campaign that was primarily directed against Judah itself. This hypothesis may also hold good for some of the Beersheba valley sites. In any case, even if we accept the theory that these sites were destroyed from 10 to 20 years before the final destruction of Judah, the material culture assemblage they contain is largely identical to that from the Judean destruction layer.

The historical-archaeological parallel between the destruction layers of Jerusalem and Lachish is quite clear. We can quote here without any hesitation Jer 7:34: "The king of Babylon was fighting against Jerusalem and against all the cities of Judah that were left, Lachish and Azekah. For these were the only fortified cities of Judah that remained, and finally to be destroyed." This verse clearly underlines the historical-archaeological reality on the eve of the final destruction. The comparison between Jerusalem and Lachish is more problematic in connection with the results of Sennacherib's campaign, in light of the stratigraphic-ceramic-chronological and historical analysis of Strata III–II made by Ussishkin. He bases it on unambiguous archaeological facts and on parallel findings from other sites (some of which are presented elsewhere in this volume). Ussishkin's hypothesis, based on the evidence that the destruction of Lachish Stratum III was caused by Sennacherib in 701 B.C.E. is well-accepted today.

However, the fate of Jerusalem did not resemble that of Lachish III at the end of Sennacherib's campaign. Both from the biblical account (2 Kings 18–19) and from the various Assyrian sources about this campaign, it can be assumed that the city was saved and not physically destroyed. Nor have we yet found archaeological evidence from Jerusalem that would contradict this conclusion. Thus at this point our archaeological-historical equation fails: Lachish equals Jerusalem only partially. We can fill in this gap with the aid of the archaeological record, mainly the ceramic typology, which is similar in Lachish Stratum III and City of David Stratum 12. This strong similarity is evidence of the identity of contents

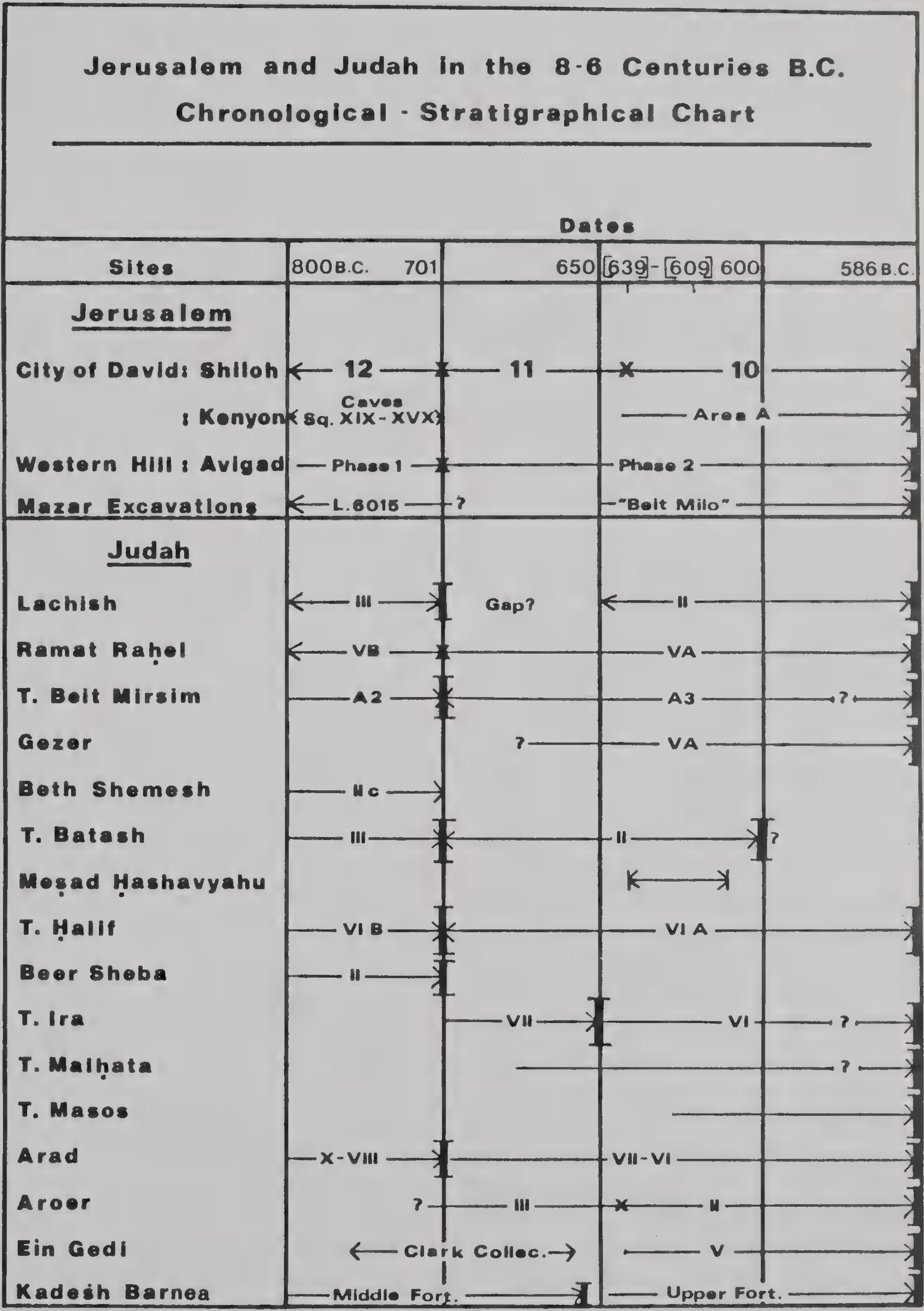

Fig. 5.5. Jerusalem and Judah in the 8th–6th centuries B.C.E.*: Chronological-Stratigraphical Chart.*

and time of these twin strata from the two central sites of Judah. Amihai Mazar attributes the destruction of Tel Batash III to this campaign. The Beersheba valley sites, such as Arad VIII, and perhaps Beersheba II, as well as Tell Beit Mirsim A2 and Tell Khalif VIB in Judah, may also have been destroyed at this date (fig. 5.5).

One of the most important additional conclusions drawn from the new Lachish excavations was the establishment of the fact that the *lamelek* jars of Tufnell's type 484 with their various *lamelek* impressions belong to Stratum III. This fact, corroborated by the Tel Batash excavations (Stratum III), assists us in establishing that the early stratum of Ramat Rahel (VB, in which a large concentration of 145 handles with *lamelek* impressions was found) is also no later than the end of the eighth century B.C.E. It is thus possible that Ramat Rahel VB was also destroyed by Sennacherib in 701 B.C.E. In the City of David about fifty stamped *lamelek* handles have been found, only some of them *in situ*, in Stratum 12. The infrequent appearance of this type of jar, or of isolated stamped handles in later strata (for instance in Tel Batash II, in Mazar's excavations near the Temple Mount, or in the Buqe^{c}ah) does not in our opinion provide evidence of the continued official use of these jars.

It is unclear what happened at Lachish at the beginning of the seventh century B.C.E. The excavators are of the opinion that there was a gap in settlement, until the reconstruction of Stratum II later in the century. In the City of David, Stratum 11 fits into the stratigraphic sequence and the ceramic classification following on from Stratum 12. This adds an important link, from the typological and ceramic points of view, that is characteristic of the first half of the seventh century B.C.E. The Beersheba valley sites, such as Ira VII and Aro^{c}er III, also have clear ceramic parallels to this stage, which is the penultimate stage to the final destruction strata of these sites (fig. 5.5).

The date for the end of the last stratum in the City of David (Stratum 10) and the other Judean sites (586 B.C.E.) and the archaeological evidence supporting it has been explained previously. But another question remains open: What is the most likely date for the start of this stratum? We have seen that during City of David Stratum 10 there was a building project that culminated in Areas E and G on the eastern slope. It would seem that the later stage in the gate and fortification system (Stage 2) uncovered by Avigad on the north of the western hill of Jerusalem also belongs to this period. We suggest that this last stage of construction in Jerusalem should be attributed to the time of Josiah. As will be remembered, some scholars think that this activity had an influence far beyond the borders of Judah and reached as far as Meṣad Hashavyahu in the west and Megiddo II in the north. If this supposition is correct, it is even easier to determine what was happening in Judah itself in the last quarter of the seventh century B.C.E.

The similarity between Lachish and the City of David that exists in the field of ceramics exists also in the epigraphic sphere. In City of David Stratum 10 the place of the sack-shaped *lamelek* jars is taken by the "rosette jars," which are more elongated and have a rosette stamped on their handles. This phenomenon is also known from Lachish II, Tel Batash II, Ein Gedi V, and Ramat Rahel VA. The palaeographic and epigraphic characteristics of the Lachish letters, and even more of the group of bullae found by Aharoni in Lachish II, have an identical parallel in the ostraca and the hoard of Hebrew bullae that was discovered in City of David Stratum 10. If the identification between the name "Gemaryahu son of Shaphan," which appears on one of the 51 bullae found in the "bullae house" in Area G, Stratum 10, and the scribe of the same name mentioned in Jer 36:9–12, 25, as being at the court of King Jehoiakim in the fifth year of his reign—603 B.C.E. (18 years before the destruction)—is accepted, then we have yet another clear chronological peg, this time from the epigraphic evidence.

A general analysis of the finds in Jerusalem and Judah demonstrates another phenomenon: the majority of the ceramic finds at these sites is of a local Judean character. The limited number of imported vessels or vessels not of local character is striking; these appear in much greater quantities at the northern sites, which in the seventh century were part of the Assyrian province, or at the coastal sites such as Dor and Ashdod. In the light of the most recent researches it seems that an intermediate area is gradually appearing in the region of the inner coastal sites such as Tel Batash and Miqne. Today we can distinguish various intersecting cultural influences in the components of the material culture of these newly excavated sites: characteristic elements of non-Judean coastal sites from the west and others of the inner Judean mountain sites from the east. A large amount of pottery characteristic of eastern Transjordan, generally designated as "Edomite pottery," appears in the Negev and Beersheba valley sites such as Masos and Kadesh Barnea. At Malhatta about 30% of the seventh century ceramic assemblage has been classified as Edomite vessels. This new chapter in regional-topographical archaeological research offers new possibilities for the evaluation of the various cultural influences and the possibility of identifying the different ethnic elements that were active in the political arena of central and southern Palestine during the seventh to sixth centuries B.C.E.

An additional point of importance is the focusing of discussion on Judah itself, independently of the north of the country. The close similarity of most of the components of material culture that existed in the tenth-eighth centuries B.C.E. between Israel and Judah now gives way to the formation of separate cultural systems, each belonging to a specific area and culture. The historical background to this phenomenon is well known. The latest archaeological research can contribute to this new socio-historical observation.

We have tried here to propose an updated model, based on the archaeological facts and the historical data we possess from the end of the eighth to the sixth centuries B.C.E. The correlation between identical classifications, both typological and historical, that are based on accurate stratigraphy and precise analysis of the finds by the various excavators, is gradually increasing, and the corresponding margin of error is gradually diminishing. This fact allows us much greater accuracy in chronological determination and in correlating the archaeological record with historical events. There is no doubt that this model, based as it is on the work of many scholars, will serve in the near future as a convenient basis for its extension to the adjacent periods, which are in need of a new, updated analysis—such as the ninth century, on the one hand, and the sixth century (the period of Babylonian domination)—on the other.

Note: This paper is based on the conclusions from one of the research projects made in the City of David Archaeological Project by the author and Alon De Groot.

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The Beginning of the Greek Settlement in Palestine in the Light of the Excavations at Tel Dor

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During the 1982 season of excavations at Tel Dor, a pit of the Persian period was cleared. Several clay figurines were found within it, as well as numerous pottery sherds. The pit was probably a *favissa* of a nearby sanctuary, of a type well known from many other sites along the Phoenician-Israel littoral, one of which had even been found at Dor itself in a previous season.

It seems that the present *favissa*, however, is unique in content. Almost the entire assemblage was purely Greek, either Attic or East Greek figurines and pottery. Careful examination of the many Attic sherds clearly shows that the *favissa*, and the associated sanctuary, had been in use between 440 and 400 B.C. It is therefore logical to assume that the sanctuary was Greek (and not Phoenician) and had been erected by Greek settlers living at Dor in this period, if not earlier.

Lately, many other sites along the Phoenician-Israelite coast have yielded similar finds, and it can be concluded that the Phoenician cult came under Greek influence not only as a result of Phoenician voyages to the Greek islands, but also from day-to-day influence of Greek settlers on their neighbors.

Introduction

In 1958 a temple of the Persian period (fifth-fourth centuries B.C.) was excavated at Tel Michal (Makmish) just a few kilometers south of Dor. From this temple N. Avigad unearthed a rich cache of terracotta figurines and stone statuettes that were executed in a diversity of styles: Phoenician, Egyptian, Cypriot, and Greek (Avigad 1960: 90–96). In his discussion of this assemblage, the excavator proposed that it be attributed to the Phoenicians who inhabited the northern coast of Israel in this period. In his opinion (Avigad 1960: 96):

> The Phoenicians who settled at Tell Makmish established their sanctuary on the small hillock. . . . [They] practiced the most popular cult of their homeland—the fertility cult. In ritual ceremonies they dedicated to their deity votive figurines, jewellery, and the like. The heterogeneous character of these votive figurines is typical of the seafaring Phoenicians, who were mediators between various cultures and developed their own hybrid style of art. . . . The most typical of these figurines are, of course, Phoenician and Cypriot. The latter indicate close relations with the island. The limestone statuettes are imported, but the terracottas showing Cypriot influence are Makmish-made by people *who were familiar* with Cypriot styles and forms. It should be remembered that Phoenicians had their colonies in Cyprus too.

Groups of statuettes of hybrid style of the type discovered at Makmish have since also been encountered at a large number of additional sites along the coast of Israel and Phoenicia (Stern 1982b:

35, no. 3), and in the first season of excavations at Tel Dor (1980), a similar assemblage was uncovered in Area B, in the southern part of the mound. This group, which was recently published, comprises a mixed assemblage of terracotta figurines and stone statuettes, and their date has been assigned to the fifth-fourth centuries B.C. (Stern 1982b: 35–54).

Like the group from Makmish, the assemblage from Dor, and in fact all other similar assemblages of figurines and statuettes found in Israel and Phoenicia, have been interpreted by their excavators (the present writer included) as remains of *favissae* (storage pits of temples; Stern 1982a: 180–82). Moreover, the discovery in the same context of Cypriot, Rhodian, and East Greek elements as well as Greek figurines together with figurines in an eastern style—Phoenician, Persian and Egyptian—were understood to be—(as explained by Avigad)—the result of direct Greek influence on the Phoenicians (Ciasca 1963: 61).

On the whole, these conclusions still appear to be well grounded, and we do not consider it necessary to reconstruct here their supporting arguments. On the other hand, the question still exists of whether the initial impetus for the influence of the Greek cult on the coastal region of Israel was solely through the mediation of the Phoenician seafarers whose familiarity with the cult was gained through their travels to the Greek islands, or whether it was a more complex and reciprocal process. In this period the Phoenician cities on the coastal region of Israel were also populated by groups of Greeks who established their own temples and from whom the Phoenicians adopted the new practices. This view seems now to be supported by new evidence uncovered at Tel Dor.

In the third season of excavations at Tel Dor (1982), a second *favissa* was revealed, this time in the northern section (Area C). This *favissa* differs significantly from all the other *favissae* in two ways. First, the major part of the statuettes found in it were executed in a marked Greek style. Second, it yielded rich ceramic finds that were predominantly Greek (Attic as well as East Greek). In our opinion, these vessels belonged to a Greek sanctuary. Its time range could be assigned with certainty to the second half of the fifth century B.C.

The Archaeological Content of the Favissa

The *favissa* was discovered at not too great a depth in the steep eastern slope of the mound (fig. 6.1, 6.2) in Area C1. It was preserved only at the lowest part to a height of about 40 cm. The upper part had been completely demolished during later construction, and consequently we have no way of assessing its original height. The base of the pit is round in shape and about 2 m in diameter.

The pit was dug into a surface of brick material (Locus L-4318, figs. 6.1, 6.2). On the east side this surface extends to the edge of the present-day slope, and it can be assumed that in antiquity it continued farther east. On the west it reached the broad brick wall (W-4323) that probably represents the city wall of Dor in the Iron Age. We have so far traced only the eastern part of this wall. The remainder is still concealed beneath the later walls (W-4326) of the Persian period. Above it, to the west is the city wall of the Hellenistic period (W-4376, third century B.C.). We thus distinguished here a series of three superimposed walls and a slight reduction in the area of the city in each period.

The date of surface L-4318 has not yet been determined. The finds collected on it date mainly to the Persian period, and a small quantity belong to the Iron Age. A meager amount of pure Iron Age material was found inside the surface. It seems likely that this surface in its entirety represents the continuation of the base of the Iron Age wall, and the brickwork above it was dismantled in the Persian period, but this can be clarified only by further excavation. In any case, this surface is clearly earlier than the *favissa* L-4321 that was dug into it.

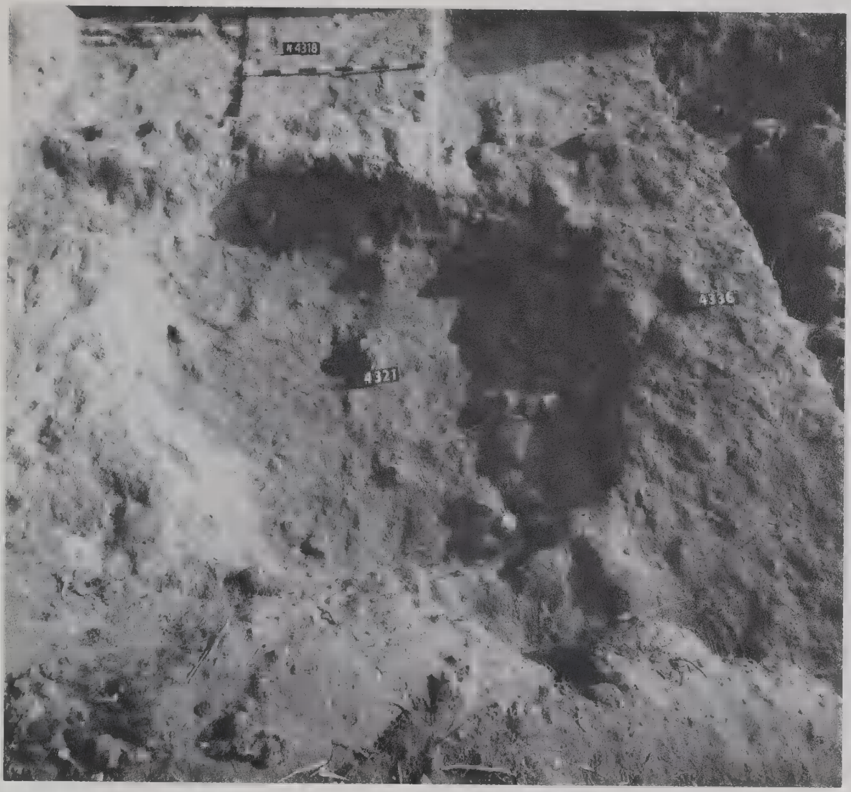

Fig. 6.1. Favissa *L-4321.*

Above the pit was a layer that sloped in a west-east direction and followed the incline (L-4301). This layer, about 1 m thick, cut through the pit and apparently served to level the surface of the subsequent building phase. A great part of the layer was undoubtedly composed of material scattered from the pit itself. This phase belongs to a later Persian period. It includes a large structure that had been built on top of the destroyed Persian wall to the east (W-4252, W-4253) and was abandoned during the construction of the Hellenistic fortifications.

To complete the picture it should be noted that on the eastern edge of the slope the course of a Roman period water pipe made of concrete (L-4330) had penetrated into this layer, and the excavation of its foundations disclosed material from earlier strata. The uppermost layer was composed of the brown soil typical of the surface level and contained mixed finds.

Thus the stratigraphy from top to bottom consists of the following (fig. 6.1):

I Surface layer
II Roman water pipe (L-4330)
III City wall and tower of the Hellenistic period (third century B.C.; W-4376; W-4129)
IV Structure of the Early Hellenistic or Late Persian period (fourth century B.C.; W-4252; W-4253)
V Debris or fill of the Middle Persian period (L-4312) which extends up to wall W-4326. Loci L-4301 and L-4336 may belong to this phase, but since they are situated in the slope outside the wall, they contained a mixed find.

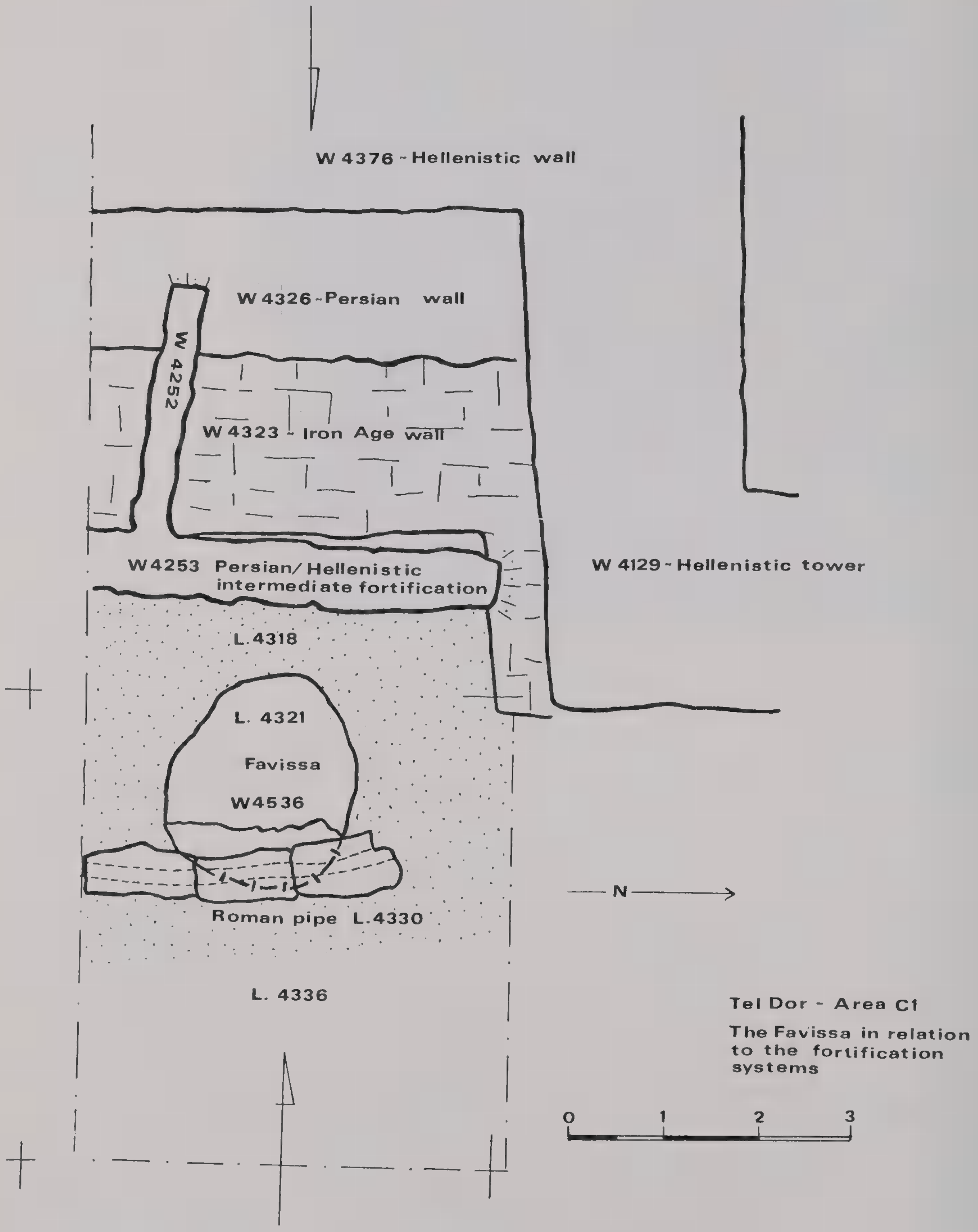
W 4376 - Hellenistic wall
W 4326 - Persian wall
W 4252
W 4323 - Iron Age wall
W4253 Persian/Hellenistic intermediate fortification
W 4129 - Hellenistic tower
L. 4318
L. 4321
Favissa
W4536
Roman pipe L.4330
L. 4336
N
Tel Dor - Area C1
The Favissa in relation to the fortification systems
0
1
2
3

Fig. 6.2. Tel Dor Area C1; the favissa *in relation to the fortification systems.*

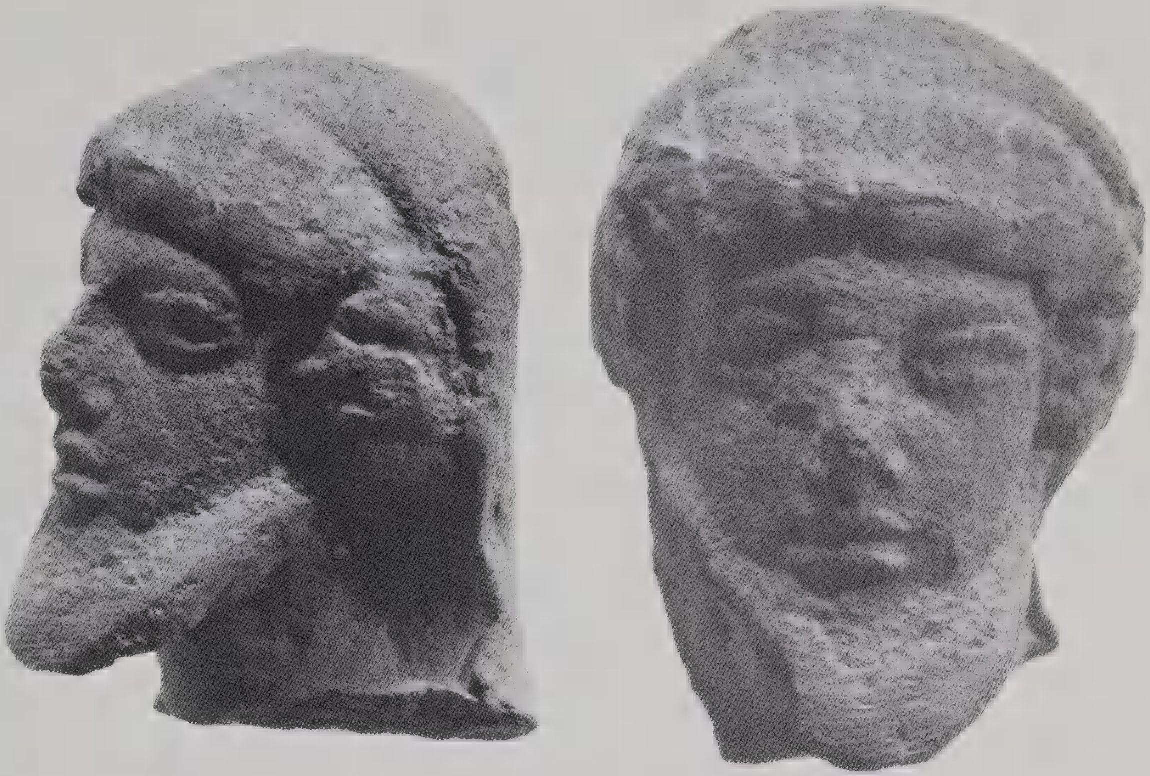

Fig. 6.3. Fragmentary figurine, head of bearded man. No. 43171.

VI *Favissa* L-4321 of the Early Persian period (fifth century B.C.)
VII Brick wall of the Iron Age (W-4323) and brick surface to its east (4318) that apparently represents its continuation

Cultic Objects from the Favissa

At the bottom of *favissa* L-4321 three fragmentary figurines were found. One depicts the head of a bearded man (no. 43171; fig. 6.3). The second is also of a bearded man wearing a wide-brimmed hat. The third figurine is a plaque molded in front and representing the figure of Astarte (no. 43118; fig. 6.5).

The two other figurines that we shall discuss here and which we also assigned to this *favissa* were discovered a short distance from it. One came from Locus 4336 adjoining the eastern edge of the *favissa* (no. 43190; fig. 6.6; see also fig. 6.1). It represents the head of a bearded man and has close analogies with no. 43171, though it is wearing a war helmet. The fifth figurine is of a young maiden (no. 43050; fig. 6.7). It was discovered in Locus 4301, several centimeters above the edge of the pit and may have been preserved inside a clump of its fill and consequently was not destroyed when the pit's debris was heaped above it. On the other hand, it may have lain on the uppermost edge of the pit and passed unnoticed.

The five figurines represent part of an ensemble of votive figurines of a temple that stood nearby and that were thrown into the *favissa* after being deliberately broken (Stern 1982a: 158–60; 1982a). It is very likely that the *favissa* originally contained other figurines as well.

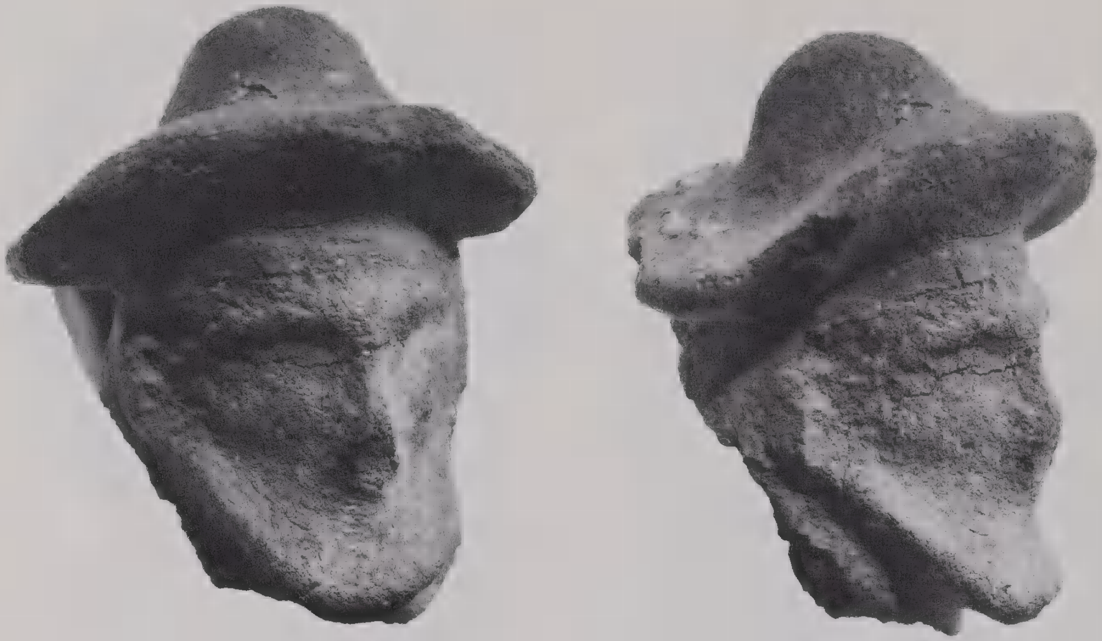

Fig. 6.4. Fragmentary figurine, head of bearded man with hat. No. 43140.

Four of the five figurines are Greek. Three represent male heads: two wearing hats and the third bareheaded. All have pointed beards and wear the archaic smile characteristic of early Greek sculpture. These three figurines are unique so far in Israel. The parallels from other sites in Israel presented in the following paragraphs have similarities, but they are in no way identical.[1] The resemblance between figurines 43171 and 43190 should nevertheless be noted (figs. 6.3 and 6.6). They may have been made in the same mold and the hat added later by hand.[2] These figurines exhibit a high standard of carving that sets them apart and places them firmly among the finest examples of figurines of the period, in contrast to the majority of Greek figurines discovered in Israel, which are indifferent specimens of simple mass production.[3]

The other two figurines represent females. One is of a young maiden and it too is archaic Greek, but more schematic in style (no. 43050; fig. 6.7).[4] The second, whose head is missing, is made in the form of a plaque molded in front, displaying the prevailing local style of the nude figure of Astarte holding her breasts in her hands (no. 43118; fig. 6.5).[5]

The figurines are in general all archaic Greek, except for the Phoenician figurine, which may have been included in this assemblage as a votive to Aphrodite, like the Greek votive figurine dedicated to Astarte by the Phoenicians (Stern 1982b: 41, 46). On the basis of the figurine types alone, it would probably be possible to assign the *favissa* to the middle of the fifth century B.C., which was in fact proposed by Robert Wenning. The dates of the Greek pottery, especially of the Attic ware, point to a later date, closer to the end of this century (see below).

Pottery from the Favissa

A considerable quantity of pottery was uncovered both in the *favissa* and in the adjacent loci, and most of the latter probably originated from the pit. The sherds are of three types: (1) Attic ware; (2) East Greek painted ware; and (3) local ware. The first two types formed the bulk of the finds.

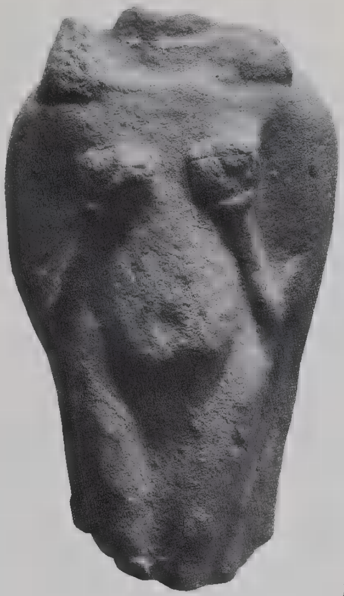

Fig. 6.5. Fragmentary figurine of Astarte. No. 43118.

Numerous sherds of Attic ware appear and a small representative selection is presented here in fig. 6.9. A large sample of this pottery was sent to Robert Wenning for examination and dating (see Table 1). The chronological conclusions presented in the following pages are all based on the results of his study.[6] Fourteen sherds from the *favissa* were examined and dated between 440–420/400 B.C. The average date of the seven sherds from Locus 4336, situated east of the *favissa*, was similar: 440–420 B.C. Two sherds from the western Locus 4318 were assigned to the years 430–400 B.C. Most of the material uncovered in Locus 4301 (above the pit) is identical in date, with the exception of one or two sherds out of twelve, which date down to 380/375 B.C. There is no doubt that the majority of these sherds originated in the *favissa*, whereas a small number belong to the following phase. We can accordingly conclude that the *favissa* was in use during the period between 440 and 400 B.C. In general terms, it can be attributed to the second half of the fifth century B.C.

It should also be noted that the Attic pottery appeared in a great variety of forms including bowls, cups, skyphoi, lekythoi, lentoids, and others. There was also a considerable quantity of painted pottery.

The East Greek pottery (fig. 6.10), which occurred in large quantities both in the *favissa* and in the adjacent loci, comprised mainly bowls, small bowls with horizontal handles, and fragments of jugs. Most of them were decorated inside and out with concentric circles and floral designs in red, brown, and black. The handles also bore a red-painted decoration. Similar East Greek vessels are now also known from numerous sites in Israel in similar contexts.[7] They were popular in eastern Greece and its colonies from the end of the eighth century down to the fifth century B.C. Each group is characterized by different features, and it is clear that they were produced in separate centers. Thus far, workshops have been identified at Samos, Rhodes, and also apparently in Cilicia (Ploug 1973: 23–83, pls. IV–XIX). At Dor itself numerous sherds, including a complete jug, were uncovered in strata from the Persian period. From the above evidence (and in the light of the more exact dates of the Attic pottery) we can conclude that the East Greek pottery discovered in the *favissa* belongs to the end of this

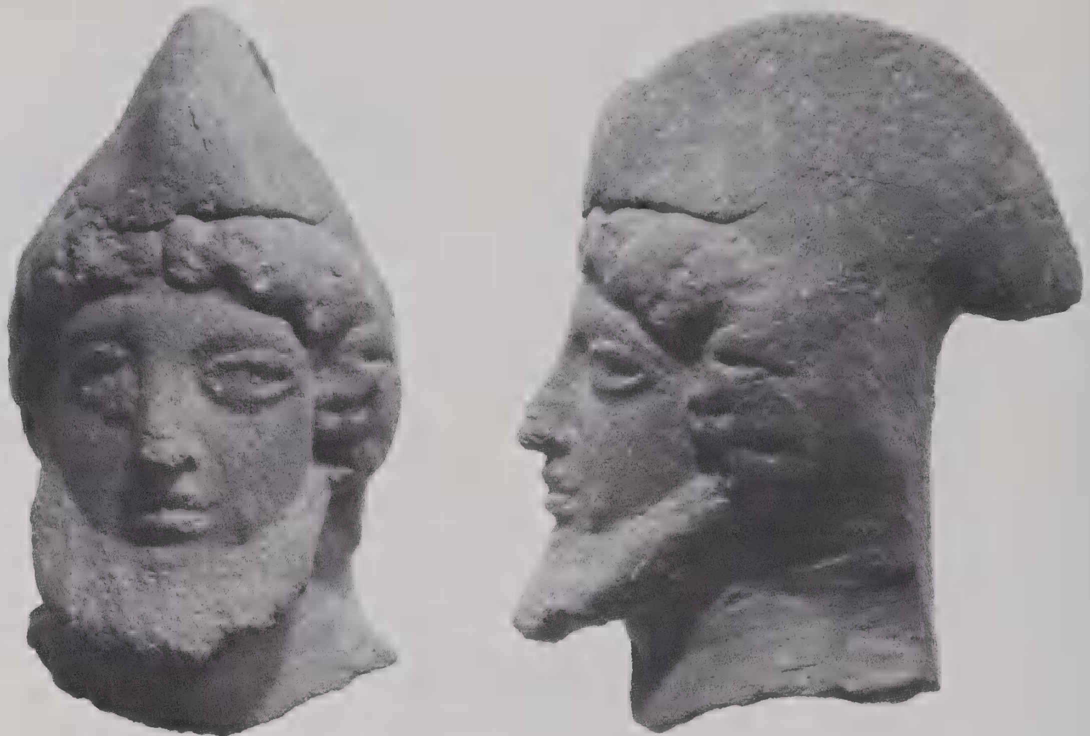

Fig. 6.6. Figure of bearded man with helmet. No. 43190.

pottery's appearance in Israel. It also demonstrates that the period of the *favissa*'s use extended down to the fifth century B.C.

Most of the sherds of the third class of pottery, the local ware, were too small to allow a reconstruction of all of the vessels types. This ware consisted mainly of small bowls and juglets. However, large fragments of two common types of vessels, large bowls and lamps, were also uncovered in large numbers. The bowls (fig. 6.11) represent the type also known as mortaria or "Persian" bowls (large heavy vessels with thick ring rims and smooth-to-coarse sides). They usually appear in two main types: (1) with flat disc to concave base (fig. 6.11a) and (2) similar to the preceding type, but with a high ring base (6.11b).

Type 1 appears in quite early contexts dating from the end of the Iron Age (seventh-sixth centuries B.C.) both in Israel and at sites along the entire length of the Eastern Mediterranean. It also continues throughout the Persian period. Important for our subject, however, is the fact that the earlier bowls dating to the end of the Iron Age were distributed mainly at sites of the earliest Greek colonies on the east coast of the Mediterranean (for example Rhodes, Samos, Western Anatolia, and Cyprus; also at Al Mina, Tell Sukas, Meṣad Ḥashavyahu, Naukratis, and others) We therefore concluded some time ago that the origin of this type should be sought within the territory of the East Greek region, and that it was merely an additional East Greek product (Stern 1982a: 96–98; Stern and Magen 1984: 16 n 4). We can furthermore assume that at least some of these vessels reached the *favissa* at Tel Dor together with the East Greek decorated pottery discussed above. The distribution of Type 2, on the other hand, is confined to Israel and is characteristic of the entire Persian period. The appearance of the two bowl types in the *favissa* can thus substantiate the date we proposed above.

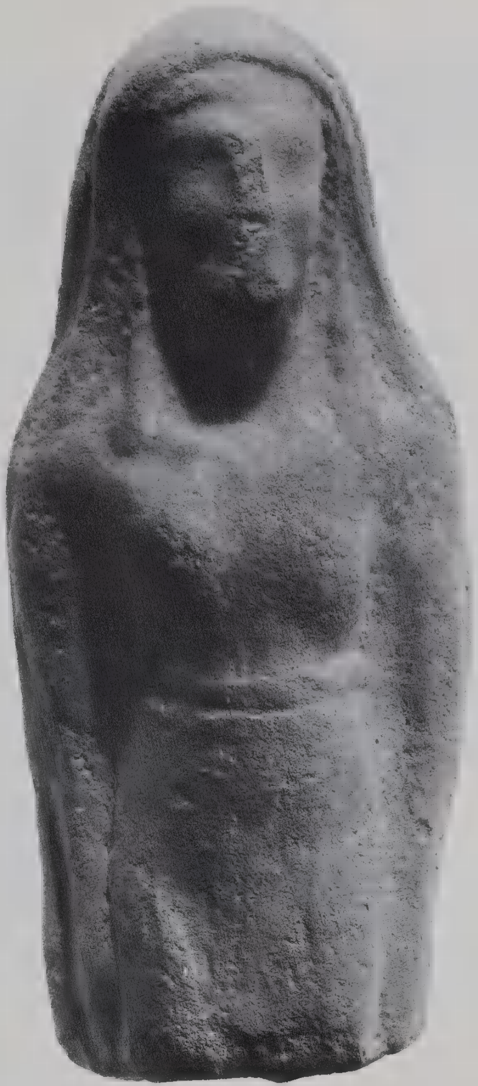

Fig. 6.7. Figure of young maiden. No. 43050.

The lamps discovered in the *favissa* included numerous examples, all of them belonging to the open, flat lamp type with straight base. The lip is flat and very wide and the single wick hole is sharply pinched. What distinguishes these lamps is that they are of the type prevalent in the coastal region. They are unusually large; their surface is knife shaved, and in some cases they bear a light burnish with wide bands. An examination of the rich lamp finds from the coastal region reveals that, like the "Persian" bowl, some of these lamps are also found in assemblages that precede the Persian period, appearing as early as the mid-sixth century B.C.) and continuing to appear down to the end of the period. Their origin stems undoubtedly from the Phoenician coast (Stern 1982a: 127–29, figs. 202–3).

From the above evidence, on the basis of the archaic Greek style of the figurines and because of the large quantity of Greek pottery of diverse types discovered in the *favissa* of Area C at Tel Dor, we suggest that this *favissa* belonged to a Greek temple that was established nearby.[8] The temple was in existence at the site at least as early as the second half of the fifth century B.C.

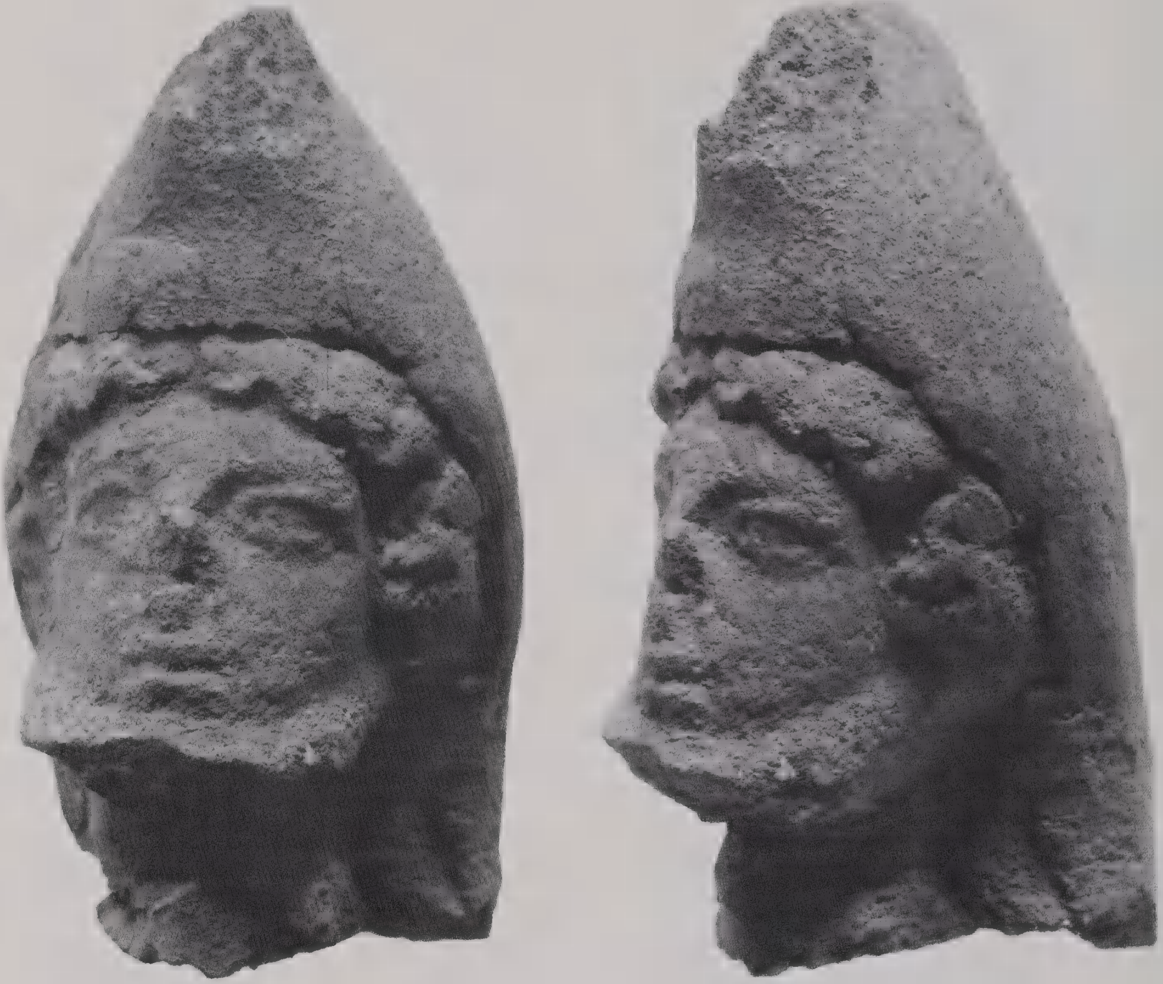

Fig. 6.8. Figure No. 30098 (see note 1).

The Historical Context of Greek Settlement at Tel Dor

The finds at Tel Dor—if our interpretation of them is indeed correct—can serve as additional evidence for a Greek settlement on the coasts of Israel and Phoenicia at the end of the Iron Age during the Persian period. This evidence can now be added to a complete chain of discoveries, both old and new, from various sites along these coasts. The evidence indicates that two types of Greek settlements existed. These consisted of:

> (1) Groups of merchants within a settled population. The most prominent of these have been discovered at Al Mina, Tell Sukas, and Tabat al Ḥammam in Phoenicia and possibly also at ᶜAkko, Jaffa, and Tell Jemmeh on the coast of Israel (see below).
>
> (2) Greek mercenaries stationed in military forts, such as Meṣad Ḥashavyahu ("Hashavyahu's Fort") near Yavne Yam (Naveh 1962; Yadin 1974; Geva 1981). Three forts were excavated in Egypt. Two at Daphnae and Naucratis were excavated many years ago Petrie 1886; Boardman 1964: 127–57). A

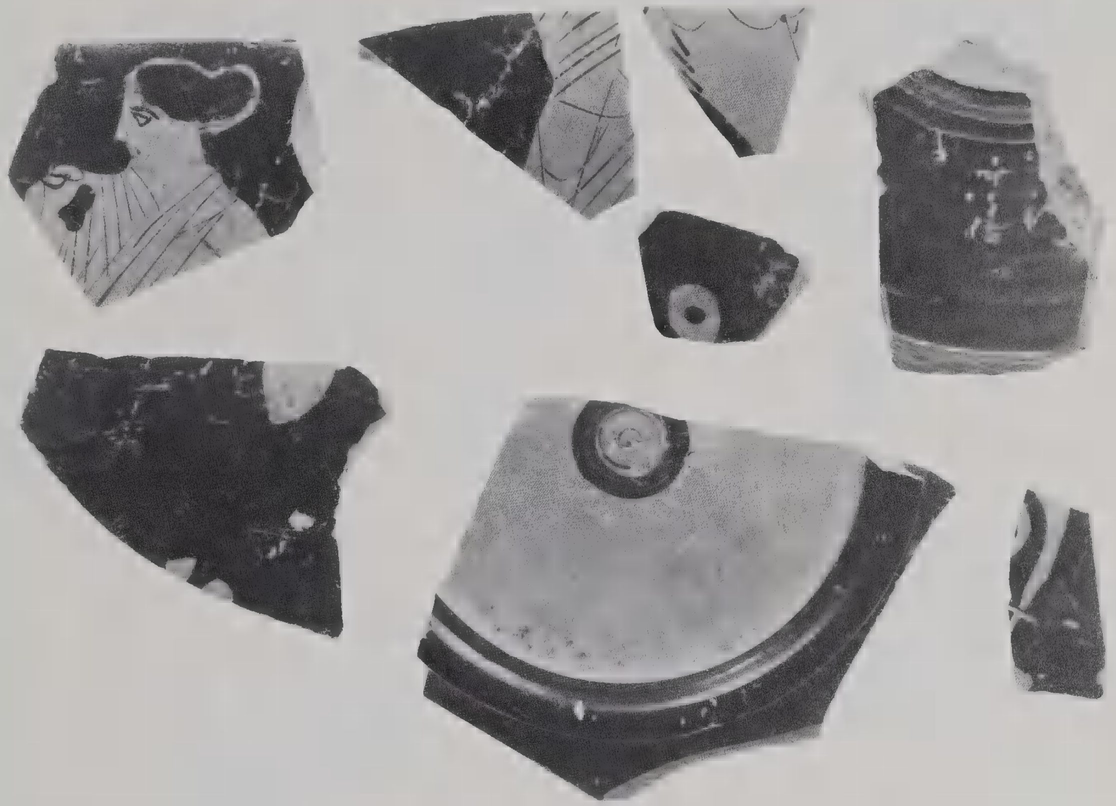

Fig. 6.9. Attic ware from favissa *and adjacent loci, representative selection.*

third fort near Tell el Ḥeir in northern Sinai, near the Pelusiac branch of the Nile was uncovered not long ago (Oren 1984).

All these sites contained large quantities of early Greek pottery; but these will not be discussed in the present article.

A brief survey of the archaeological data of the *commercial* settlements of Greeks in the region reveals the following evidence. At Al Mina at the mouth of the Orontes, ten strata of settlement were excavated by Leonard Woolley prior to World War I. The ten strata were grouped into three main periods. The first period (Strata X–VII) was founded at the end of the ninth century B.C. and continued to exist down to the end of the eighth century B.C. (the time of the Assyrian conquest). Following a short break, the buildings of the second period were constructed (Strata VI–V), and these were attributed to the seventh century B.C. These strata yielded a large quantity of Greek pottery that had been imported in the first period from Euboea and the Cyclades, as well as local pottery. Greek pottery from the second period was found in even greater quantities, though it differed in origin. The Greek mainland pottery from Euboea vanished almost entirely and was replaced by East Greek pottery from Rhodes, Lesbos, Chios, and Samos, as well as a small amount of Corinthian ware, which apparently arrived through the mediation of the islanders. In the third period (Strata IV–III, dating to 520–

TABLE 1. The Dates of the Attic Pottery[a]

L. 4321 (440–420/400 B.C.)		
43113		red fig. Skyphos
43113/18		black fig. Bowl
43116/16	540/425	stemless Cup
43285	5th C.	Cup
43154/2	425/400	Skyphos
43127	440/420	Skyphos
43267/1	ca. 420	Bolsal
43287	420/400	Bolsal
43113/18	late 5th C./ early 4th C.	Bolsal?
43154/4	425/400	Bowl
43267/2	450/400	Bowl
43154/1	420/400	Bowl
43234	425/400	Bowl
43113/11	430/420	Lekanis?
L. 4336 (440–420 B.C.)		
43289/2	440/420	Skyphos
43316	440/420	Skyphos
43248/18	440/420	Skyphos
43289/1	ca. 430	Bowl
43219/6	420/400	Bowl
43219/7	420/410	Bowl
43248/9	ca. 425	Squat Lekythos
L. 4318 (430–400 B.C.)		
43136/1	ca. 430	Bowl
43097/1	425/500	Bowl
L. 4301 (430/420–380–375 B.C.)		
43089/1		Black fig. Bowl
43026/1	late 5th C.	red fig. Column Krater
43056/5	ca. 420	Cup (Attic?)
43069/5	440/425	Skyphos
43056/3	420/400	Bolsal
43026/4	430/420	Bowl
43056/2	420/400	Bowl
43056/1	430/420	Bowl
43056/6	420/380	Bowl
43019/6	4th C.	Bowl
43085/18	450/425?	Salt cellar (Attic?)
43091/3	400/375	Plate

[a] All dates provided by Robert Wenning. The dating of the *Favissa* sherds is based on comparison with the Agora material only. Because of the homogenous picture this seems sufficient for the moment.

375 B.C.) the city was rebuilt on a wholly new plan and almost every pottery fragment found thereafter at the site was of Athenian origin. This city consisted of blocks of warehouses, which in Woolley's opinion were connected with the introduction of Attic imports. The ceramics were shipped in large transports and were sorted according to classes, shapes, and decoration. One warehouse, for instance, stored only vessels decorated with an acanthus design. Another contained only lamps and a third only *aryballoi*. These warehouses apparently represented complete shipments of goods produced in Athenian potteries. There is no doubt whatsoever that in this period, at least, Greek merchants resided in the city (Woolley 1953: 172–88; Boardman 1964: 70–79).

At nearby Tell Sukas, which was excavated in the 1960s by P. J. Riis, a similar picture was revealed. At Sukas a succession of Phoenician strata continued down to the end of the first quarter of the seventh century B.C. Three building phases, which were interpreted as successive Greek strata, followed. According to the excavator, these contained, in addition to pottery and other finds, Greek temples and ritual vessels. A contemporary Greek cemetery was excavated nearby. This settlement ranged in date from 675 to 498 B.C. when it met its destruction at the hands of the Persians. Apparently this was due to the participation of its inhabitants in the great Greek revolt. After a short interval, the Persian settlement was renewed. (Riis 1970; 1979; Ploug 1973; Parrot 1969: 435–50; Niemeyer 1982: 237–75). An almost identical picture emerges, as far as we can judge today, from Braidwood's excavation at Tabat el Ḥammam, another coastal city in this region (Braidwood 1940: 198).

Evidence for the settlement of Greek merchants has also been discovered in Israel. We shall mention here several examples. At Tel ᶜAkko, a rich assemblage of Attic-Greek pottery was discovered

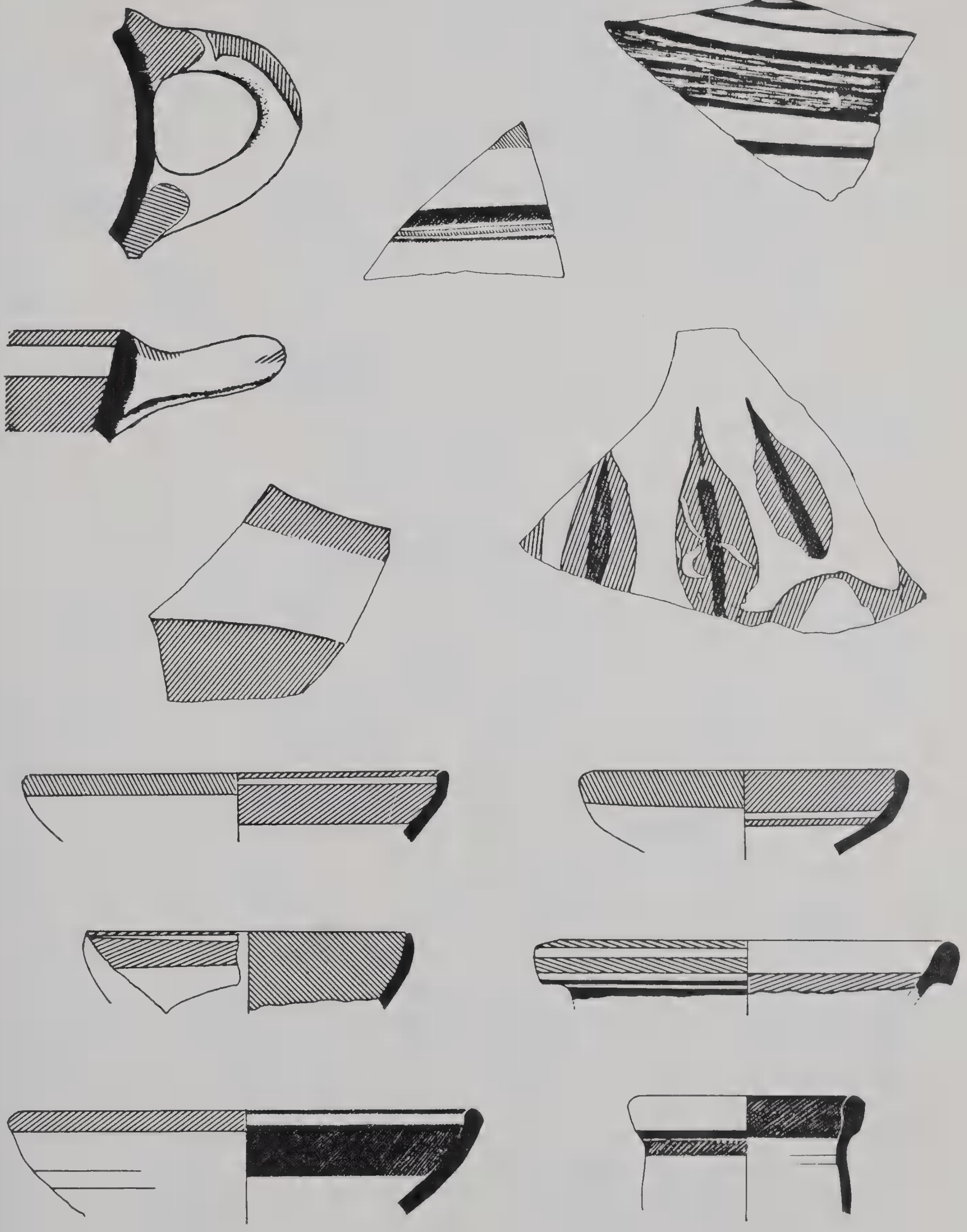

Fig. 6.10. East Greek pottery sherds from the favissa. *L. 4321.*

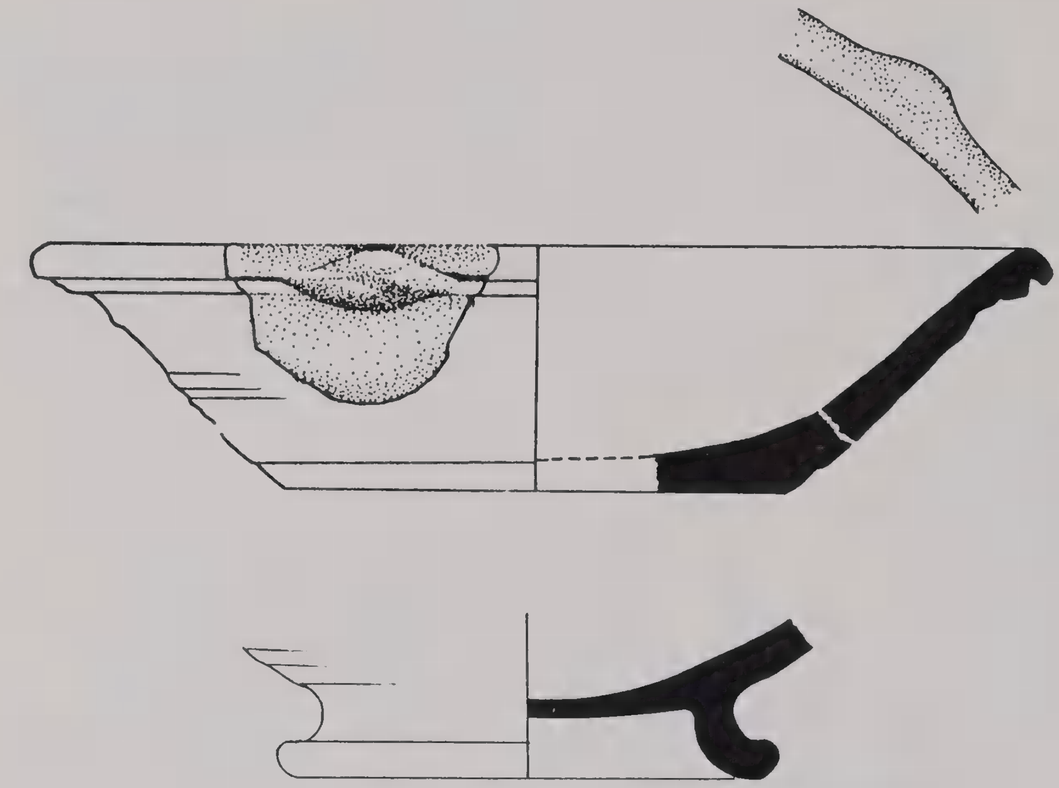

Fig. 6.11. Mortaria or "Persian" bowls.

in buildings in the western part of the mound, and on the basis of this find, the excavator, M. Dothan, stated: "The finds in area F attest that the northwest section of the mound contained in the Persian period a rich merchants' quarter, mostly Greeks, who inhabited the finest section of the town" (Dothan 1979: 151; Tcherikover 1963: 31 n 5).

From the excavations at Jaffa, a large warehouse of the Persian period that has close affinities with the plan of the warehouses at Al Mina was recently published. A sizeable amount of pottery was found on the floor of one of the rooms. All the vessels were of a single type and all bore similar red-figured decoration. The excavator compared this find with the form of commerce practiced at Al Mina. Like that northern Phoenician port city, it is very likely that a group of Greek merchants resided in Jaffa during this period and engaged in the wholesale trade of the products of Athenian potteries.[9]

In the same manner Athenian pottery was also apparently brought to Tell Jemmeh. According to one account, the discoveries there included: "About a dozen of the Red-figured cups [which] were evidently painted by the Pithos Painter; although not found on the same site, they may have been purchased at the same time in Athens and carried over on the same vessel to the Eastern Mediterranean coast, whence they were distributed to several merchants."[10]

The general impression received from the Greek settlement of the seventh-fourth centuries B.C. in Phoenicia and apparently also in Israel is of a Phoenician city that contains a strong Greek element. The Greek population in these cities did not constitute a majority of the inhabitants as in the Greek colonies in the western Mediterranean (except perhaps at Tell Sukas for a brief period).[11] Rather, they reflected the quality of *Enoikismos*—a settlement of Greeks among Phoenicians, or the more or less peaceful coexistence of a foreign Greek element in an already populated city. No matter which of these alternatives is applicable, it now seems that there is a more solid archaeological basis for the statement of W. F. Albright many years ago: "In the sixth century B.C. numerous Greek trading posts were established on the coasts of Egypt, Palestine, and Syria" (Albright 1960: 124).

Finally, to return to the city of Dor during the Persian period, we do not accept the often-reiterated view that this city was a member of the Delian League under the leadership of Athens during this period (Dahl 1915: 62–63, Tcherikover 1963: 73, 353 n 15). It is evident in the light of the new evidence, however, that the nucleus of a Greek population was indeed present in the city.

Notes

[1] The three male figurines are without parallel in Israel. For the bearded head (no. 43190; fig. 6) we found a close analogy at Olympia dating from the years 475–470 B.C. It represents a head of Zeus and is part of a double figurine depicting Zeus and Ganymde (Richter 1969: 94, fig. 114). Heads of warriors wearing a Greek war helmet, on the other hand, are frequently encountered in *favissae* in Israel (Stern 1982a: 174, fig. 295:5–6; Stern 1982b: 40). They occur in two types. One is in a Greek style of which several examples (each one different) have been found. One example was found at Tell Ṣafi (Bliss-Macalister 1902: 40 fig. 14, right side) and a second at Tel Ṣippor (Negbi 1966: 18, pl. XII:83) that has been explained as representing Hermes. Recently an example was found at Tel Michal (Herzog 1980: pl. 35:3), and another at Tel Dor (Stern 1982b: 40, pl. III:6). The second type depicts a warrior wearing a similar helmet, but this is a local imitation of the Greek warriors. Examples of these occur at Meqabelein (Lankester-Harding 1950: pls. XIII:1; XV:12), Shikmona (Elgavish 1968, pl. 43:69), Tell Keisan (Briend and Humbert, 1980: 347, pl. 105:57–59), and Sarepta (Pritchard 1975: figs. 42:3; 56:6). For the male figurine no. 43140 (fig. 6.4) wearing the wide-brimmed hat (*Petasus*), which is the usual symbol of Hermes, the only analogous male head discovered in Israel is the figurine of the "banqueter" from ʿAtlit (Johnes 1933: 79, no. 624, pl. 26; Stern 1982a: 172, 176, fig. 298:2). The "banqueter" was uncovered in Tomb L-21-B, in Burial C-2, together with fragments of a lekythos of the fifth century B.C.

[2] In the fourth season (1983), an additional isolated figurine of this type was found at Dor (no. 30098). It lay on the floor of a dwelling room of the Persian period (Locus 3031 in Area B in the southern region) was produced from an identical mould (fig. 6.8). A helmet of a type different from those worn by the two identical figurines from our *favissa* was added to this figurines as well—apparently by hand. During the 1985–86 seasons, more examples have been found with different headdresses.

[3] Robert Wenning, who examined the photos of these two figurines, noted: "The two Greek terracotta heads are of best quality. I would like to date them close to 450/440 B.C. Therefore they belong to the earliest among the *favissa* material, which is second half of fifth century. But the heads have still to be researched if they can be dated a little further down (cf. the mouth) in the fifth century with having some older features in the tradition of works from ca. 460 B.C. This depends partly on the location of the workshop."

[4] This figurine has a number of parallels in the *favissa* at Tel Ṣippor (Negbi 1966: 5, no. 40:6, n 42, and references there; 10, nos. 3–6; pl. 2:3–6 [especially no. 4]).

[5] This plaque was made according to the finest ancient Canaanite-Phoenician tradition (see, for example, Tadmor 1982; Mazar 1982), which also continues into the Iron Age (for further examples, Dothan and Freedman 1967: pl. XVII:10; Dothan 1971: pls. LVII–LVIII; Gophna 1970: 27, pl. VI:1–3, 7). It is so far a unique specimen among the Palestinian finds of the Persian period. Though the head is missing, the tip of an Egyptian wig has been preserved on the shoulders. The fragment visible on the left shoulder bears round incisions that represent the hair of the wig in the style typical of Phoenician ivories of the Iron Age (see, for example, Pritchard 1954: 39, no. 131; 1975: fig. 43:1).

[6] Robert Wenning of the Westfälische Wilhelms University in Münster, West Germany, kindly studied the Attic pottery from the *favissa*, and I would like to take this opportunity to thank him for his assistance. He also provided the data in Table 1.

[7] For example, Stern 1982a: 100, figs. 127–28 (from ʿAtlit). Additional examples came from Taanach, Tell Qudeis, Gilʾam, ʿAtlit, Tel Megadim, Ramat Raḥel, Ein-Gedi, Ashdod, Tel Seraʾ, and Tel Mevorakh (see the detailed bibliography in Stern 1978: 40–41; 41 n 64). Recent examples also have been found at Tel Michal (Herzog 1980: 132–33, pl. 34:1, 3–4) and Tell Keisan (Briend and Humbert 1980: fig. 21:11).

[8] The existence of Greek temples in the Phoenician cities in Israel may very likely have brought about the revival of the widespread custom of the use of *favissae* in local temples of the Persian period. Though the practice of burying ritual objects—figurines as well as large statues—that were deemed unfit for use was customary in the Late

Bronze Age, it enjoyed a resurgence in the Persian period (Tufnell 1940: 21, pl. X:2; pls. LXVI–LXVII). A considerable number of *favissae* of this period have been found so far at sites on the coast and in the Shephelah, and in most cases these pits serve as the sole evidence for the existence of temples, since actual remains of the buildings are very scarce. *Favissae* of this type have also been encountered on the Phoenician coast, some of huge dimensions and containing hundreds of objects. This phenomenon may perhaps also be explained as the imitation of a widespread Greek custom—the revival of ancient local practice due to contact with the new Greek ritual. On the great *favissae* in Greek temples, see for example the finds from the Temple of Apollo at Kourion in Cyprus (Young and Young 1955; Karageorghis 1979: 289–315).

[9] Ritter-Kaplan 1982: 64–68. This city is also connected with the ancient Greek legend of Perseus and Andromeda first mentioned in the *Periplus Mare Erythrium*, attributed to Pseudo-Scylax and dated to the middle of the fourth century B.C. Other early Greek legends are connected with Ashkelon (Herodotus I, 105).

[10] Clairmont 1954: 120. It should also be noted that J. W. Crowfoot in his analysis of the rich Attic pottery finds from Samaria noted: "A few years ago these vases would have been regarded as imports brought into Palestine by the Phoenicians, but recent discoveries (i.e., Al Mina) suggest that they may have been carried to the coast of Syria in Greek bottoms. . . . Fragments of more than thirty vases were found by us and it is clear that there was lively intercourse between Samaria and Athens during the Persian period" (Crowfoot, Crowfoot, and Kenyon 1957: 212–13).

[11] P. J. Riis suggested that these settlements were consolidated as the result of a particular political constellation, and that with its change, they ceased to exist. In his view in the period under discussion, the state controlling the settlement at Tell Sukas was specifically interested in developing trade with Greece at the expense of the Phoenicians. The coast at the time of the beginning of Greek settlement at Sukas was under the domination of the Kingdom of Hamath, whose kings desired to limit the monopoly of the Phoenicians (Riis 1970, 1979; Niemeyer 1982).

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New Data on the Relationship between Judah and Edom toward the End of the Iron Age

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Two new discoveries now give additional weight to the theory that the Edomites had actually seized and occupied Judean lands of the eastern Negev around 600 B.C. The first is an Edomite ostracon that was discovered at Ḥorvat ᶜUza. The second is an Edomite shrine that was discovered and recently excavated by the author at Ḥorvat Qitmit, 10 km south of Tel Arad.

The nature of the relations between Judah and Edom during the final years of the Judean Monarchy and the role played by the Edomites in the downfall of Judah are subjects that have long intrigued both archaeologists and biblical historians. Moreover, anyone who has tried to deal with the matter has been thwarted by an almost complete lack of data concerning the role of the Edomites in the decisive events of this period. There is also a dearth of information regarding the material and spiritual culture of the Edomites. So far, the Bible has been our primary literary source. But it has told us little more than that Edom was at various times subjugated by Judah and Israel but nevertheless managed from time to time to shake off the yoke of oppression.

Until recently, the extra-biblical sources consisted only of the Arad letters (Aharoni 1980). Ostracon No. 24, for example, provides an illuminating picture of the Edomite threat against the Judean outposts in the eastern Negev on the eve of a presumed attack—an attack that according to Aharoni resulted in the destruction of Stratum VI at Arad in the year 595 B.C. Bartlett, on the other hand, who dealt with the Edomite presence in the Negev (1971, 1979, 1982), came to the conclusion that "Edom played no direct part in the events of 587 B.C." (1982: 23).

Edomite material culture, represented by their pottery, was first recognized at two keys sites, Buseira in Transjordan and Tell el-Kheleifa near Eilat. Both sites are characterized by unusual pottery shapes and decorations. Soon afterward, the same pottery—although in much smaller quantities—began to turn up in settlements in the eastern Negev such as Tel Aroer, Tel Ira, and Tel Malḥata, and even further afield in places like Kadesh-Barnea (Mazar 1985: fig. 7:1). From the archaeological point of view, the presence of this pottery in Judean territory could mean one of three things: trade relations with Edom, or the existence of pockets of Edomite population under Judean hegemony, or—as hinted in the Bible and the Arad letters—the conquest of Judean lands and settlements by the Edomites.

The dilemma regarding the nature of the Edomite presence in the biblical Negev continued until 1984, when two exciting discoveries in the eastern Negev changed the picture and gave additional weight to the theory that the Edomites had actually seized and occupied Judean lands at the end of the First Temple period.

The first discovery was an Edomite ostracon that was unearthed in the gateway of the fort at Horvat ᶜUza in the Eastern Negev (Beit-Arieh and Cresson 1985).

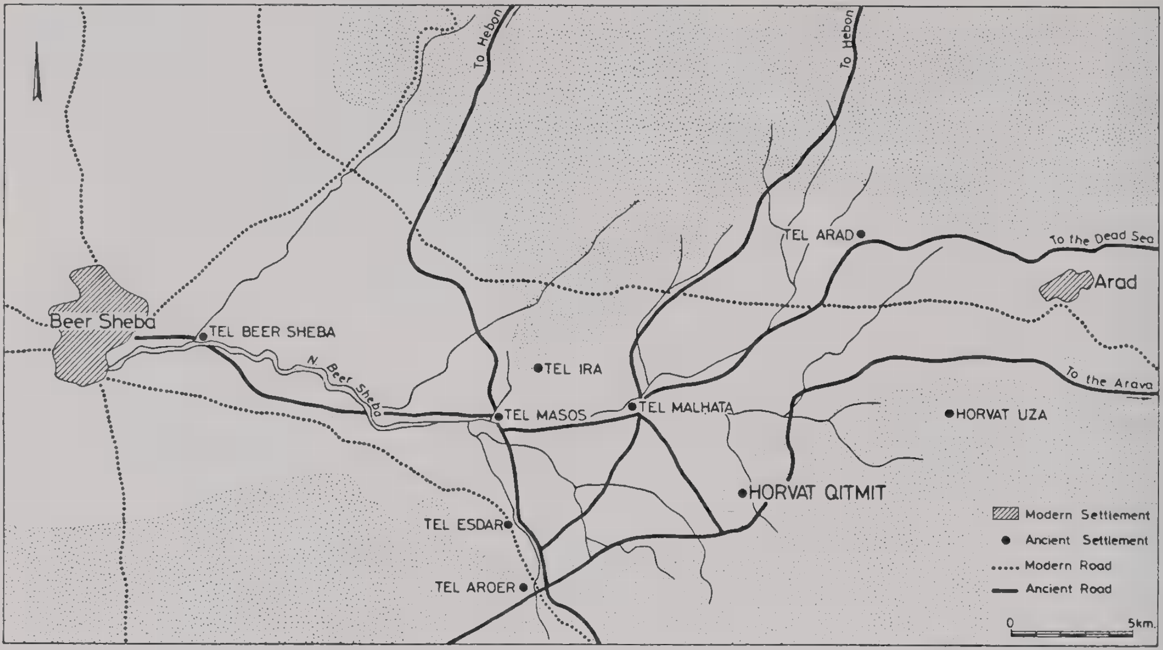

Fig. 7.1. Map of the Beersheba-Arad area.

Transcription	*Translation*
1. *ʾmr. lmlk. ʾmr. lblbl.*	1. (Thus) said Lumalak (or ⟨E⟩limelek): Say to Blbl!
2. *hšlm. ʾt. whbrktk*	2. Are you well? I bless you
3. *lqws. wʿt. tn. ʾt. hʾkl*	3. by Qaus. And now give the food (grain)
4. *ʾsr. ʿmd. ʾḥʾmh* [ ]	4. that Aḥiʾma/o. . . .
5. *whrm ʿ*[*z*]*ʾl. ʿl mz* [*bḥ*(?) . . .]	5. And may U[z]iel lift [it] upon (the altar?). . . .
6. [ ] *ḥmr. hʾkl*	6. [lest] the food become leavened (?)

The text is a short letter, probably addressed to the commander of the fort, who was Edomite, by a high Edomite official. After a rather standard opening formula in the first two lines, the blessing of the Edomite god Qaos is invoked. Then follow instructions to deliver some kind of food to the messenger who brought the letter. We have surmised that the food *ʾkl* mentioned may have been dough for baking bread, since the last line contains the word *ḥmr*, which seems to be connected with the leavening process.

The second discovery is a sacred complex that—according to all evidence and logic—is an Edomite shrine. It was found at a site known as Ḥorvat Qitmit about 10 km south of Tel Arad. (fig. 7.1). This site was first recorded in 1979 by a survey team of the Institute of Archaeology which I headed. We became particularly interested in the site when we noted among the Iron Age II pottery strewn over the surface a large quantity of fragments of figurines and reliefs.

Horvat Qitmit lies on a long, flat hilltop about 100 m above the plain of Arad, commanding a sweeping view of the Beer-sheba and Arad valleys. Also visible from its summit are three neighboring Israelite settlements: Arad, Tel Malḥata, and Tel Ira. The architectural remains consist of two complexes of buildings and enclosures and two additional rounded enclosures. The excavations conducted in

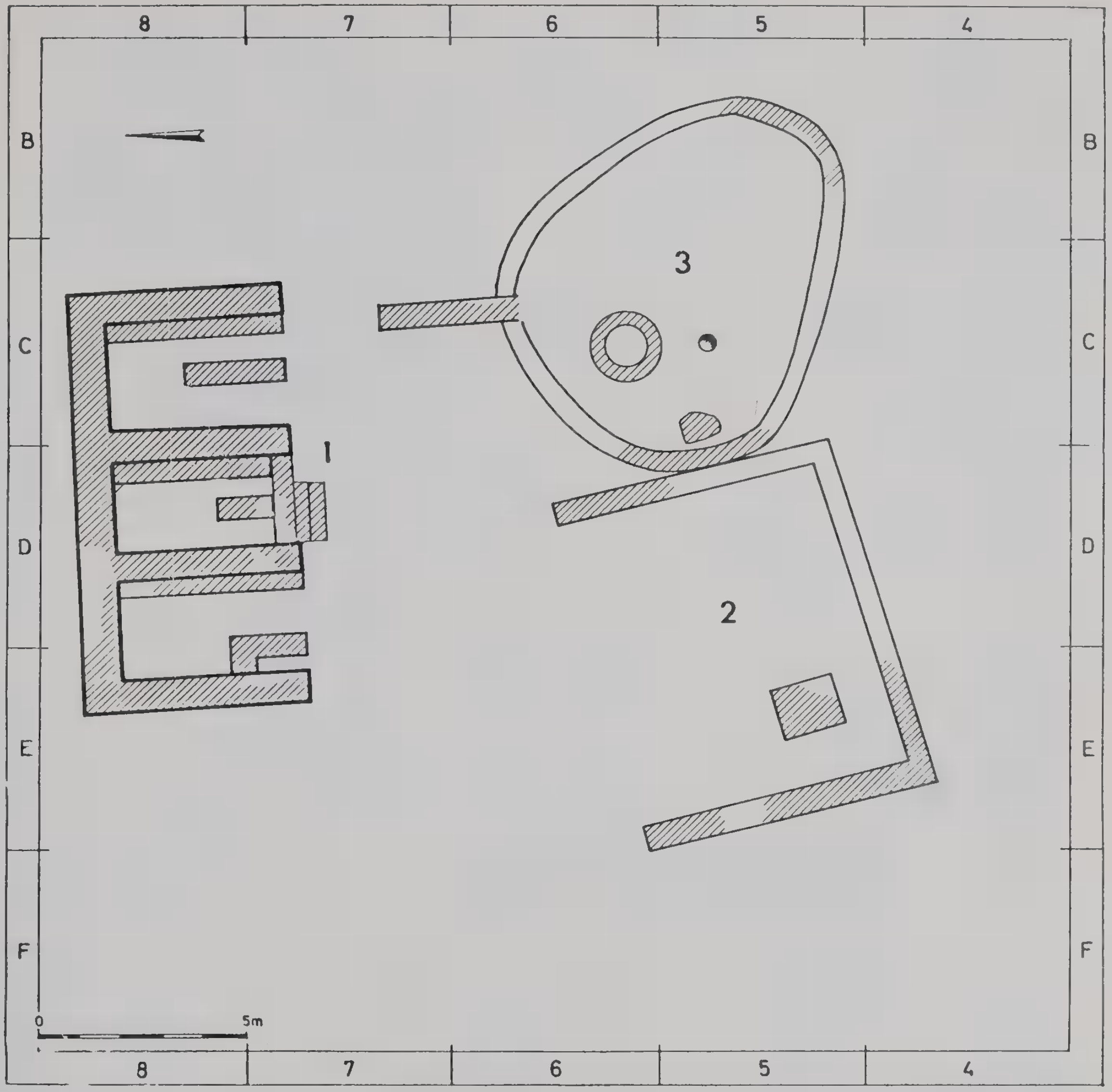

Fig. 7.2. Schematic plan of southern complex, Ḥorvat Qitmit.

1984–86 showed that the remains date to the end of the seventh and the beginning of the sixth centuries B.C.E. Since the southern complex was apparently the sacred precinct, we shall concentrate on this. The northern complex, only partially excavated so far, seems also to be of a cultic nature.

The southern complex is comprised of three architectural elements (fig 7.2): a rectangular structure (no. 1 on the plan), a platform or *bama*, bounded on three sides by stone fence (no. 2 on the plan), and a stone basin and altar that were apparently enclosed by a circular stone fence (no. 3 on the plan). The rectangular structure, whose outer dimensions are 5.5 × 10.5 m is divided into three rooms of almost equal size. The entrances to the rooms are as wide as the rooms themselves. Perpendicular to each opening is a short wall about 60 cm high, finished at the top with a course of flat stone slabs. These low walls could have served as podiums on which to set statues of the deities. The entrance to the central room has a threshold and two steps. Along the eastern side of each room there is either a bench, or the wall has been thickened. A thick layer of ash, about 40 cm deep, covered the floors, which were of compacted chalk. The numerous sherds found in these rooms were apparently rubbish deposits, since apart from one complete bowl (an imitation of Assyrian "palace ware"), none of the fragments could be put together to reconstruct a complete vessel. The ash layer also contained many animal bones.

South of the entrances to the structure there was a low platform or *bama*, which was built of fieldstones directly on the chalky bedrock. It measures 1.00 × 1.25 m. The area around it, approximately 6 × 7 m, was bounded on three sides by a stone wall, leaving the side facing the structure open.

East of this enclosure is a stone-built basin about 1 m in diameter, built above ground. It was plastered both on the interior and the rim. Nearby there were two other elements: a small altar cut from a flint boulder and a round hole hewn into the chalky bedrock. Judging by the fragmentary segments of walls to the east and west, these elements were probably enclosed by a circular stone fence.

The numerous pottery sherds found in both the structure and the enclosures may be divided into two categories: the first consists of sherds of Judahite vessels of the late seventh and early sixth centuries of the types found in Lachish Stratum II, En-Gedi Stratum V, Arad Stratum VII–VI, Tel Ira VI, Ḥorvat ᶜUza IV, Tel Aroer, and Tel Malḥata. The second group is composed of sherds of Edomite pottery, mainly fragments painted in geometric patterns and bowls with triangular knobs and censer cups. There were also some imitations of Assyrian "palace ware." The same pottery was found at Buseira, Tawilan, Umm el Biara, and Tell el-Kheleifa. It also appears, but in smaller quantities, in all Iron Age II sites in the eastern Negev, particularly at Tel Malḥata, Tel Aroer, and Tel Ira.

The most interesting finds were the cultic objects, which were concentrated in the enclosure containing the *bama*. These included cylindrical stands, some of them fenestrated, that were evidently used to support incense-burning bowls. There were also dozens of zoomorphic and humanoid figures, decorated in red and black, as well as a number of relief fragments. Some of the figurines are hollow and others are solid. The zoomorphic figurines were sometimes attached to the vessels at the side and sometimes by the soles of their feet. They were either joined to the sides of the cylindrical stands or placed on small projecting ledges Some of the human figurines depict only the torso. The lower half of the body was represented by a triangular wedge that was evidently inserted into some other object. One of the figurines is a sphinx. Two of the restored stands have the face of a bearded man with a hooked nose with two small arms pressed flat against his sides. Some of the features such as the nose, as well as the hands, are practically life-size (fig. 7.3).

Another cultic object is the head of a three-horned goddess painted red, with black features (fig. 7.4). The only parallel that we found to this goddess and her unusual facial expression is a bronze head of a figurine from the Lower Galilee, published by Sellin in 1900 (p. 7, fig. 1).

In addition to these restorable figurines, there were many pottery fragments with similar elements. Some can be identified as human by their eyes, locks or hair, hands holding various objects, and their feet. Others that belong to the world of fauna and flora include horns and hoofs of sheep and cattle, heads of birds, and stylized pomegranates (which in one case were attached to a bowl). The total number of complete vessels and fragments of this sort, retrieved in the excavations or collected from the surface of the site, totals more than 500 items.

To summarize: Even a cursory observation of these artifacts leaves no doubt that they are unique in the Iron Age iconography of the Land of Israel. Their study is currently being undertaken by Pirhiya Beck. So far, it seems that there are no exact parallels to the modeled stands, although somewhat similar vessels made in the same technique are known. Some of the objects, such as the sphinx and the

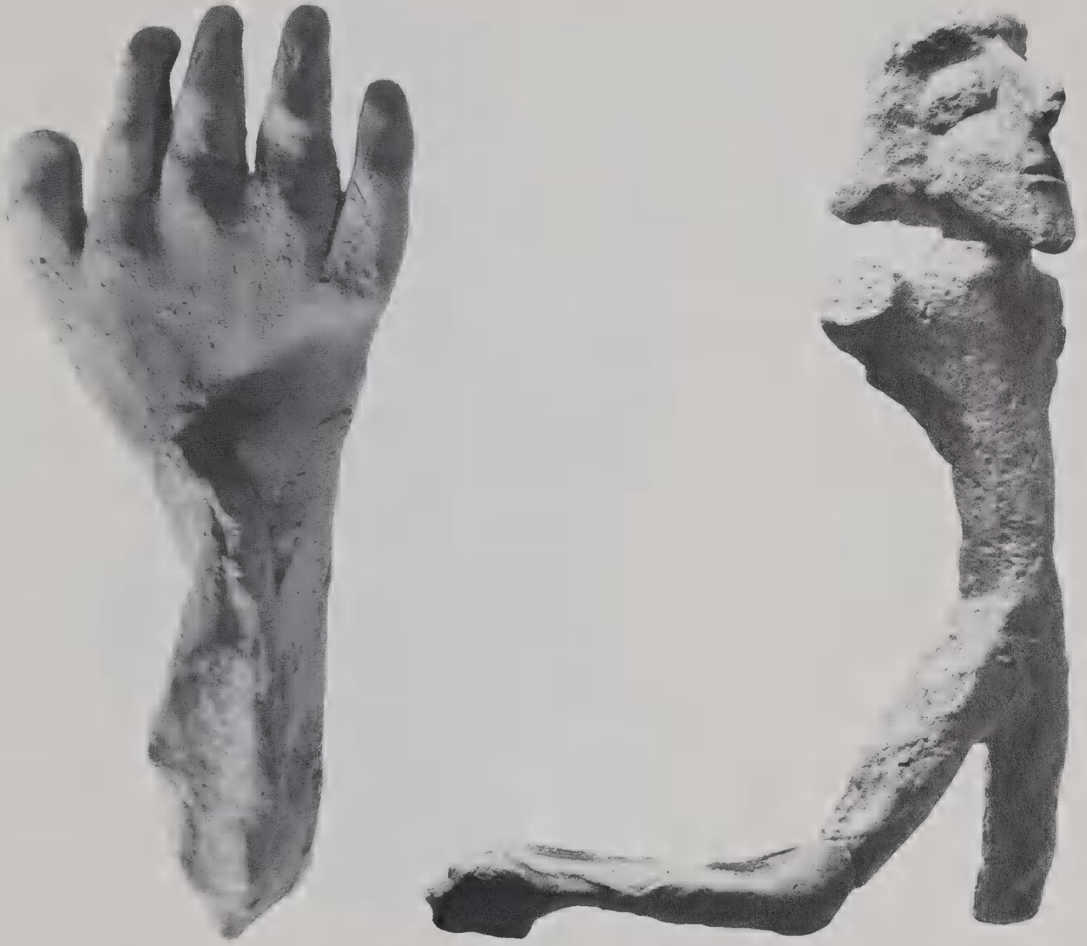

Fig. 7.3. A hand of a clay statue and kneeling figurine which was attached to a vessel, Ḥorvat Qitmit.

humanoid figurines, were very likely influenced by the Phoenician culture prevailing along the coasts of the Mediterranean Sea at the time. For the others, we should seek our parallels on the other side of the Jordan River.

The layout of the shrine whose most sacred precinct was the three-sided enclosure, and the iconography in particular, are completely alien to the land of Judah in general and the material culture of the eastern Negev in particular. When looking for the cultural source, we must, of course, consider the abundance of Edomite pottery found at the site and the similarity of several of the figurines to those found in Edom itself. we should also note the resemblance between the three-room structure of the temple complex and the Edomite architectural tradition, which is reflected by a temple of the Hellenistic period at Mareshah in Idumaea. The latter, which is open to the south, is almost identical to the rectangular structure with its south-facing entrance at Qitmit.

In the light of all this evidence, there seems so far to be little doubt that this shrine at Qitmit was an Edomite place of worship serving an Edomite population located in Judean territory and functioning around the end of the First Temple Period. Its existence in this region is probably evidence of

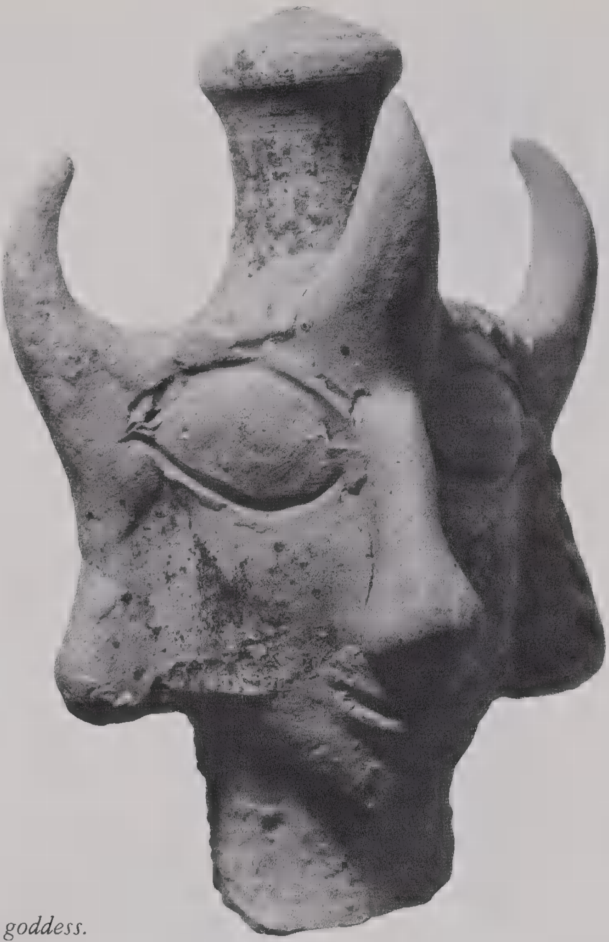

Fig. 7.4. A three-horned goddess.

Edomite occupation of the eastern Negev at the time Judah was already weakened by the Babylonian conflict, or a few years after the destruction of Judah. It should be remembered that a state of belligerency already existed between the Edomites and Judahites long beforehand, as is mentioned several times in the Bible in the books of the prophets (Jer 49:7–22, Ezek 35:1–5, Joel 4:19, Amos 1:11–22, Obadiah). The Edomite menace is well expressed in Ostracon No. 24 from Arad, with its terse conclusion: " . . . Lest the Edomites come!" Now once again their ominous presence in the Negev is established by the recently discovered Edomite ostracon from Ḥorvat ᶜUza.

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Instrumental Neutron Activation Analysis and the Origin of Iron Age I Collared-rim Jars and Pithoi from Tel Dan

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Between 1150–1050 B.C. biblical Dan produced storage jars of the "Galilean" and collared-rim types locally. These jars are all of an earlier date than those from Tel Qasile, Tel Mevorakh, and Shiloh. Locally made storage jars accounted for 31% (6 out of 19) of all collared-rim jars analyzed from Tel Dan. The remaining 69% (13 out of 19) were imported from seven different geographical regions, a fact attested by the seven different chemical compositions that appeared under analysis. A collared-rim jar from Tel Qasile (Table 1: QASI 60) matched two Tel Mevorakh jars (Table 1: MVRK 35 and 36) which were local to the Tel Mevorakh region. Of the total of 30 jars that were analyzed in Jerusalem, we encountered 14 different chemical fingerprints, pointing to 14 different origins.

Introduction

According to an account in the Bible (Judges 18), the Tribe of Dan moved to the North of Canaan from Zora and Eshtaᶜol (situated in the region north of Beth Shemesh) where they had dwelled previously. At the beginning of this Instrumental Neutron Activation Analysis (hereafter referred to as INAA) project we thought that some insight into the movement of the Danites might be obtained through an archaeometric examination of the ceramic cultural remains from Tel Dan in relation to pottery from the south of Canaan during the Early Iron Age I. We have focused our study on collared-rim jars because they are considered to be an Israelite hallmark. Thus, our paper may contribute to Biran's archaeological study of collared-rim jars and the settlement of the tribe of Dan (Biran 1988).

In all, 30 storage jars and pithoi were sampled (Table 1). Samples of 17 collared-rim storage jars (COLLAR 1–17 in Table 1). Two collared-rim jars from Tel Dan, previously analyzed at Berkeley (DAN 57 and 94 in Table 1), were also studied. A total of 19 collared-rim jars were sampled from Tel Dan alone. These were subjected to INAA with the objective of learning where they were manufactured. INAA has been proved to be effective in determining the origin of pottery (Perlman and Asaro 1969). The selected collared-rim jars from Tel Dan constitute almost 50% of all collared-rim jars found there, so that INAA results may be representative for Tel Dan as a whole. We should point out, however, that only about 2% of the tell has been excavated. In addition, eight samples of collared-rim jars (two from Tel Mevorakh, three from Tel Qasile, and three from biblical Shiloh) were analyzed as well for comparative purposes (Table 1).

At Tel Dan, these storage jars were dated between 1150–1050 B.C. (Biran 1980: 173–74; 1988). They were all found in Strata VI and V except for COLLAR 20, which belongs to Stratum IV (tenth-ninth centuries B.C.). At Tel Qasile, the collared-rim jars were dated from the second half of the

Table 1. List of Samples Taken from Collared-rim Jars and Pithoi from Tel Dan, Tell Qasile, Tel Mevorakh, and Shiloh

Lab. Code	Lab. No.	Figure (Biran, this volume)	Stratum	Registration No.	Locus	Site	
Collar	1	Fig. 4.16:8	VI	10694/1	1225	Tel Dan	
Collar	2		V	9738/a	586	Tel Dan	
Collar	3		V	9833/1	586	Tel Dan	
Collar	4	as Fig. 4.18:6–8	VI	10699/6	1241	Tel Dan	
Collar	5		V	9848/1	586	Tel Dan	
Collar	6	Fig. 4.1:4	V	10606	1223	Tel Dan	
Collar	7		VI	20141	8060	Tel Dan	
Collar	8		VI	20643	8180	Tel Dan	
Collar	9		VI	20525	8156	Tel Dan	
Collar	10	as Fig. 4.23:4	VI	18628/7	4349	Tel Dan	
Collar	11		VI	18566/1	4328	Tel Dan	
Collar	12		VI	18566/2	4328	Tel Dan	
Collar	13		V	9856	586	Tel Dan	
Collar	14	Fig. 4.23:1	VI	18628/4	4349	Tel Dan	
Collar	15	Fig. 4.23:2	VI	18628/5	4349	Tel Dan	
Collar	16	Fig. 4.23:3	VI	18628/6	4349	Tel Dan	
Collar	17	Fig. 4.3	V	9821	586	Tel Dan	
Collar	18	Fig. 4.7:68	V	10604	1212	Tel Dan	Galilean
Collar	19	Fig. 4.7:69	V	10105	678	Tel Dan	Phoenician
Collar	20		IV		2093	Tel Dan	Phoenician
Dan	57		V	6243/2	431	Tel Dan	
Dan	94		V	6753/1	431	Tel Dan	
Qasi	60	Qedem 20, p. 57, 116	VIII	QI 635/1	44A3	Tel Qasile	*IEJ* 1(1951) fig. 12:f
Qasi	61	Qedem 20, p. 57, 116	IX/VII	QIII 8253	Building Z	Tel Qasile	*IEJ* 1(1951) fig. 10:C
Qasi	70		X		770	Tel Qasile	
Mvrk	35	Qedem 9 Fig. 19:4	8/7	1183		Tel Mevorakh	
Mvrk	36	Qedem 9 Fig. 19:4	8/7	1275		Tel Mevorakh	
Shiloh	1		11th c. B.C.			Shiloh	
Shiloh	2		11th c. B.C.			Shiloh	
Shiloh	3		11th c. B.C.			Shiloh	

TOTAL 30 SAMPLES (27 collared-rim jars, a Galilean, and two Phoenician jars)

eleventh to mid-tenth century B.C. (A. Mazar 1985: 57–58). At Tel Mevorakh, the jars were dated to the late eleventh–tenth centuries B.C. (Stern 1978: 68). Both Tel Mevorakh and Tel Qasile yielded three or four specimens each. At Shiloh, more than 20 collared-rim jars have been found. Israel Finkelstein (1986: 22, 39) dated them to the period prior to the destruction of Shiloh by the Philistines in the mid-eleventh century B.C. An example of each type of collared-rim jar is depicted in the figures of Biran's paper to which our Table 1 refers. The description of the jars is also treated in more detail in the accompanying study by Biran (1988).

Collared-rim storage jars were first found at biblical Dan in stone-lined silos and pits sunk into Late Bronze levels, without any evidence of additional architectural structures (Biran 1988). It is assumed that this population was Israelite (Albright 1924: 10; A. Mazar 1985: 57–58) and that the newly settled Israelites at Tel Dan lived in tents. The archaeological evidence is that as soon as the Danites conquered Laish in the middle of the twelfth century B.C., collared-rim jars appear and continue to appear until about 1050 B.C., when the first conflagration of Israelite Dan occurred. After this destruction, the collared-rim jars disappear from Tel Dan. The "Phoenician" (Aharoni 1957: 21; Bikai 1976: 209) and "Galilean" type pithoi (Amiran 1970: 232) coexisted in Strata VI and V at Tel Dan with the collared-rim jars.

In Table 1 the jars are grouped by laboratory numbers. The laboratory numbers are related to type, photograph or drawing, stratum, registration number, and locus from the excavations at Tel Dan, Tel Qasile, Tel Mevorakh, and Shiloh. These laboratory numbers will be cited to facilitate reference and to identify the individual storage jars.

The analytical data derived from analysis of these collared-rim jars are recorded in Tables 3 and 4. The chemical composition of the jars in itself tells nothing about their origin. To determine origin one needs groups of reference pottery from various archaeological periods and from different sites (among them, from Dan itself). Origin is assigned when one finds a ceramic-reference group of known origin having the same composition as the pottery in question.

Reference material from an archaeological site usually consists of ceramics (unfired, fired, or over-fired) for which the excavator has made a strong case for local manufacture. If there is a statistical match between the chemical compositions of pottery of interest (here, collared-rim jars) and that of a pottery reference group, it is assumed that the origin of the pottery of interest has been determined. If various pottery reference groups of different sites are closely similar but not identical in chemical composition, then a regional designation is assigned to the pottery under study, rather than attributing it to a specific site.

When it is not possible to find a match for pottery due to the lack of reference groups, then it is usually possible to say where the pottery did not come from, and this in itself is often of tremendous importance for the archaeologist. The probability of finding a match is increased by examining reference material from other laboratories. In order to compare results from different laboratories, however, the laboratories should be rigorously intercalibrated so that comparable precision of measurement is attained in each.

In the present study, we have utilized the Dan reference group of pottery from the Lawrence Berkeley Laboratory. Our respective laboratories are rigorously intercalibrated (Yellin and others 1978). The Dan reference group consists of a Late Bronze cooking pot and jar and 11 Iron Age I cooking pots, 8 storage jars, 3 bowls, a krater, a pyxis, a jug, and a body sherd (its chemical composition is shown in column 1 of Table 3).

Archaeological Questions

The "Galilean" (also called "Hazor") type of pithos is not a collared-rim jar. In fact, this type jar, like the "Phoenician" jar, was known from the Late Bronze period and was characteristic in the north of Canaan. Ruth Amiran drew attention to collared-rim jars of the Iron Age "Galilean" type (1970: 143, 232). The main characteristic of this type was the addition of jar handles that had been absent on similar Late Bronze pithoi. The latter type had a rather long tradition, appearing in MB IIC and lasting throughout the Late Bronze period. Because of the distribution, Amiran classified these Late Bronze jars as belonging to the northern Canaanite ceramic culture.

The origin and manufacturing center(s) of collared-rim jars, however, have been questioned by all who have studied this type. Were collared-rim jars produced at a single site from which they were

Table 2. Correlation Between Chemical Group, Strata, and Sample Number of Jars from Tel Dan

DAN	I[a]	II	III	IV	V	
Stratum IV						20
Stratum V	2[b], 6, 18, 57		5, 17, 19	3, 13		
Stratum VI	12, 94	1, 7, 8, 9	16	11	10, 14	4, 15

[a] Roman numerals refer to the chemical groups from Tables 3 and 4.
[b] Arabic numerals refer to sample numbers from Table 1.

distributed, or were they made at several sites from which they were traded? If the latter is true, the jars must have been traded because of what they contained. If this were not the case, the jars would probably have been manufactured at a single site instead of having their origin at markets dispersed all over the country, as the different chemical compositions of the jars seem to indicate.

The evidence indicates that the collared-rim jar is foreign to the north and originated somewhere else. At Shiloh only narrow-mouthed collared-rim jars appeared in the excavations (Finkelstein and others 1984: 22). This connects the narrow-mouthed collared-rim jar at Tel Dan more closely with the southern part of Israel than with any other region.

Collared-rim Jars

In Table 2 the numbers of jars that match chemically are tabulated. There is a small group of 3 collared-rim jars (Collar 2, 6, 12) and a "Galilean" type pithos (Collar 18) which match two other collared-rim jars: Dan 57 and 94. This group will be treated as chemical group I, with a total of 6 samples.

The second chemical group is composed of Collar 1, 7, 8, and 9, which are all narrow-mouth collared-rim jars. The third chemical group consists of Collar 5, 16, 17, and 19 (the "Phoenician" type jar). The fourth chemical group comprises Collar 3, 11, and 13. Two other jars, Collar 10 and 14 (both collared-rim jars) belong together chemically. This leaves us with Collar 20 (the pithos with the snake motif) of Stratum IV, which stands apart, and with Collar 4 and 15, which are chemical loners.

If we now examine the distribution of the collared-rim jars at various loci in the stratigraphy at Tel Dan, we obtain the following information: Five jars (Collar 2, 3, 5, 13, and 17) were all found in Locus 586 of Stratum V. These five jars originated in four different places, as is indicated by their four different chemical compositions.

Four jars (Collar 10, 14, 15, and 16) were found in Locus 4349 of Stratum VI. These four jars were manufactured at three different sites, as the three distinct chemical compositions for the samples testify. This provides an opportunity to investigate whether there is a connection between the origins of storage jars found in both loci (586 of Stratum V and 4349 of Stratum VI). To put it more clearly, seven out of nine collared-rim storage jars from only two loci at Tel Dan have no connection in origin to one another. From this fact alone one may conclude that Dan had trade relations with many different locales simultaneously between 1150 and 1050 B.C.

"Phoenician" Pithoi

We analyzed two large-mouth pithoi. One was decorated in bas-relief with a wavy line (COLLAR 19) and the other with a snake in bas-relief (COLLAR 20). Pithos COLLAR 19 belongs to Stratum V, whereas COLLAR 20 was found in Stratum IV of the late tenth century B.C. or the beginning of the ninth century B.C. Similar jars have been encountered in sites on the Phoenician coast, specifically at Tyre (Bikai 1976: 209). In fact, Israeli archaeologists refer to these jars as "Phoenician." How far Phoenicia extended into Palestine is at present unknown.

Analytical Data

Because our respective laboratories are intercalibrated we are able to utilize much of the analytical data from both Hebrew University and Lawrence Berkeley Laboratory. Both laboratories have analyzed much pottery from the eastern Mediterranean. As already mentioned in the introduction, a group of reference materials from Tel Dan had been analyzed at Berkeley prior to the analysis of collared-rim jars in Jerusalem. The Tel Dan reference group consists of 28 samples of Late Bronze and Iron Age I pottery of diverse forms. All members of this group are chemically homogenous. Therefore, they all came from a single site. Because the reference group from Dan consists of pottery from three strata (VII, VI, and V) and includes different typological forms, we have a strong case for local manufacture of the entire group.

Column 1 of Table 3 shows the chemical composition for 17 chemical elements of the Tel Dan reference group. Each chemical element is expressed by M ± S, where M is the mean value of all 28 members of the pottery group, and S stands for the spread of values among these members (Root—Mean—Square Deviation). Typical deviations in the mean values are about 7.7%, which makes it highly probable that these vessels have a common origin and, based on the variation in form of so many samples that share common analysis, were local to Dan (Table 1, column 2).

Column 3 of Table 3 represents four collared-rim storage jars (COLLAR 2, 6, 12, and 18). Two additional jars analyzed at Berkeley (DAN 57 and 94) belong to this group. We have not included DAN 57 and 94 in the group mean in order to maintain a clear distinction between our analyses and those done in Berkeley. The homogeneity is quite good here as evidenced by an average spread for fifteen elements of 5.8% (see column 4, Table 3). Comparing columns 1 and 3 statistically, one sees that they are very similar. Columns 1 and 3 were compared statistically using student's t-distribution. For each pair of mean values, the probability was calculated that the difference in the means was due to a statistical fluctuation. A pooled estimate of the variance was employed (see, for example, Meyer 1975). In probabilities calculated for 14 of the 17 elements, 80% of the elements ranged from about 0.05 to 0.8, which is indicative of a good match between the groups. This means only one thing, namely, that the six storage jars were made locally at Tel Dan. These jars comprise five collared-rim jars and a "Galilean" type jar. One jar belongs to Stratum VI, whereas five came from Stratum V. In the case of Stratum VI, it might be interpreted that the Danites produced their own collared-rim jars as soon as they had settled in Dan and that they continued to manufacture collared-rim jars throughout Strata VI and V. Furthermore, the earliest collared-rim jars (Stratum VI) had narrow mouths, like the ones from the Bethel area. There is no confirmation, however, from the analyses at hand that would point toward an import of collared-rim jars into Dan from the Bethel area, and we lack representative reference material from Bethel or Shiloh.

The local group of collared-rim jars from Tel Dan (Group I) also includes COLLAR 18, which shares the chemical composition of the others but belongs to a jar-type called "Galilean." COLLAR 18 was found in Stratum V, and its type originated in the Late Bronze period in northern Canaan.

TABLE 3. Chemical Group I of Collared-rim Jars found at Tel Dan Compared with the Ceramic Reference Group of Tel Dan and Their Statistical Connotations[a]

Element	DAN[b] Reference Group 28 samples m ± S	Spread in percent	Collared-rim[c] jars 4 samples m ± S	Spread in percent
La	43.40 ± 3.00	6.9	40.58 ± 3.24	8.0
Na %	0.19 ± 0.04	22.8	0.21 ± 0.04	19.4
Ca %	11.10 ± 1.20	11.2	7.54 ± 2.49	33.1
U	2.10 ± 0.11	5.5	2.08 ± 0.16	7.6
Sm	7.53 ± 0.48	6.3	6.40 ± 0.40	6.3
Lu	0.46 ± 0.04	9.3	0.42 ± 0.02	4.6
Yb	3.24 ± 0.29	8.8	2.92 ± 0.18	6.3
Ta	1.90 ± 0.12	6.5	2.01 ± 0.20	9.9
Ce	92.60 ± 6.50	7.0	88.95 ± 5.88	6.6
Eu	1.87 ± 0.14	7.7	1.55 ± 0.10	6.3
Hf	7.58 ± 0.53	6.9	7.67 ± 0.03	0.4
Fe %	5.58 ± 0.35	6.3	5.85 ± 0.40	6.9
Co	22.90 ± 1.95	8.5	25.85 ± 1.59	6.2
Th	10.44 ± 0.62	6.0	10.85 ± 0.49	4.6
Cr	129.00 ± 9.00	6.8	128.00 ± 5.00	3.7
Sc	15.93 ± 0.92	5.8	15.05 ± 0.29	2.0
Rb	70.00 ± 12.00	17.00	60.00 ± 10.00	17.2
Average Spread		7.7%		
Average Spread of 15 elements				5.8%

[a] All values are stated in parts-per-million unless otherwise noted.

[b] INAA data from the Berkeley Laboratory databank.

[c] COLLAR 2, 6, 12, and 18 to which DAN 57 and 94 also belong.

Apparently, the Danites continued the Late Bronze tradition of making this type of jar, which spread throughout the Galilee. Aharoni suggested as long ago as 1957 (referring to the jar from Tuleil) that this type of jar was transitional between the Late Bronze pithoi and Early Iron collared-rim jars (1957: 21–22).

The remaining 24 collared-rim jars divided into five chemical groups, comprising 16 samples (see Table 4), and 8 chemical loners (COLLAR 4, 15, 20, QASI 61, 70, and SHILOH 1, 2, and 3). At this stage of our research, we are unable to trace any of these five chemical groups and loners with certainty back to their origin. Therefore, in order to make our point, it is sufficient to present a shortened list of elements here. Seven chemical elements are listed in Table 4. It is clear that all five groups are chemically different and do not match statistically.

Chemical group II, comprising four samples, is shown in column 1 of Table 4. This group consists of COLLAR 1, 7, 8, and 9. A comparison of group II with the reference group from Tel Dan (as tabulated in column 1 of Table 3) shows clearly that both groups have nothing in common. This means that these four collared-rim jars (group II) were not made at Dan but elsewhere. The chemical compositions of other ceramic groups from the northern coastal area of Israel have been analyzed at

Table 4. Five Chemical Groups of Collared-rim Jars from Tel Dan, Tel Qasile, and Tel Mevorakh Compared[a]

Element	Dan Group II 4 Samples[b] M ± S	Dan Group III 4 Samples[c] M ± S	Dan Group IV 3 Samples[d] M ± S	Dan Group V 2 Samples[e] M ± S	Qasile and Mevorakh 3 Samples[f] M ± S
La	29.90 ± 1.00	30.90 ± 1.20	34.7 ± 4.7	51.40 ± 0.70	41.20 ± 2.40
Ca %	10.30 ± 0.90	15.90 ± 1.40	12.5 ± 0.8	4.60 ± 3.90	10.60 ± 1.50
Fe %	3.44 ± 0.61	3.40 ± 0.29	4.6 ± 0.2	7.06 ± 0.94	4.05 ± 0.47
Co	19.90 ± 1.30	16.30 ± 1.20	21.5 ± 3.3	28.00 ± 2.10	22.30 ± 3.40
Th	8.12 ± 0.46	7.14 ± 0.38	8.9 ± 0.4	12.20 + 1.00	8.50 ± 0.40
Cr	254.00 ± 20.00	213.00 ± 14.00	106.0 ± 3.0	160.00 ± 29.00	154.00 ± 10.00
Sc	14.40 ± 0.70	11.50 ± 0.80	12.4 ± 0.7	17.40 ± 0.30	15.30 ± 0.80

[a] All elemental values are in parts-per-million unless otherwise noted.

[b] Collar 1, 7, 8 and 9.

[c] Collar 5, 16, 17 and 19.

[d] Collar 3, 11 and 13.

[e] Collar 10 and 14.

[f] Qasi 60, Mvrk 35 and 36.

Jerusalem. These compositions are somewhat similar in pattern to that of chemical group II, but they do not provide the kind of statistical match necessary to determine provenience with certainty.

Four samples, Collar 5, 16, 17, and 19 (Collar 19 is of the "Phoenician" type), have been placed together in a chemical group (group III in column 2). The origin of group III is unknown. Archaeologically, this group might be linked to the northern coast of Canaan because of the presence of the "Phoenician" pithos in the group, but this has not been proven chemically, due to the lack of reference pottery.

Three additional samples, Collar 3, 11, and 13, together form chemical group IV, which is shown in column 3. This group is entirely different in composition from all previously tabulated groups. At present, we do not have the faintest idea where its origin might be. With respect to form, Collar 11 is a hybrid, whereas Collar 13 has an egg-shaped body form reminiscent of collared-rim jars.

Two samples, Collar 10 and 14, belong together chemically and have been placed in column 4 (Group V). As with group IV, we are at present unable to determine the provenience of these jars.

Group VI (column 5) consists of a collared-rim jar from Tel Qasile and two from Tel Mevorakh. Previously, the Tel Mevorakh jars were defined as being closely related to a group of local pottery from Tel Mevorakh (Yellin and Perlman 1978: 68). Qasi 60 was defined as an import into Tel Qasile (Yellin and Gunneweg 1985: 116).

Chemical Loners

Collar 20, the pithos with the snake motif, stands entirely alone. We have encountered a similar chemical pattern in Late Bronze and Early Iron Age pottery at Tel Akko on the northern coast of Israel (Gunneweg and others 1986: 14).

Collar 4 and 15 are two chemical loners. Their origin is unknown. The analysis of Qasile 70 does not match that of two other collared-rim jars from Tel Qasile, nor that of any of the other collared-rim jars analyzed.

Three collared-rim jars from Shiloh (Shiloh 1, 2, and 3) differ from one another chemically and do not match any of the other jars analyzed. The implications of this fact for the history of Shiloh, in the Bethel area, are unknown.

Discussion and Conclusion

A group of five collared-rim jars and a "Galilean" pithos, all excavated at Tel Dan, were traced—with the aid of INAA—to Tel Dan as their place of manufacture. This locally-made group of 6 jars represents 36% of 22 jars analyzed from Tel Dan. The 6 jars were found in Strata VI and V, which indicates that the newly settled Danites made their own jars locally as soon as they settled at the site (Stratum VI), and continued doing so (Stratum V). The Israelites of Stratum VI at Dan made collared-rim jars locally (DAN 94 and COLLAR 12), out of the group that we sampled. This type of jar is foreign to northern Canaan.

Because five additional collared-rim jars that were not made at Dan, but at four different sites, were found in Stratum VI, we infer that the very same Danites also imported collared-rim jars—or brought them with them—in spite of the fact that they made their own jars at Tel Dan. From this we deduce that the object of this trade might not have been the jars themselves but rather their contents. This trade was focused on goods from various directions, because, as INAA showed, the jars came from various sites.

The Danites also manufactured locally the "Galilean" type of jar (COLLAR 18) that is characteristic of northern Canaan, as we have seen above. COLLAR 18 belongs to Stratum V. In Locus 1225 of Stratum VI, a collared-rim jar was found side-by-side with a "Galilean" jar (not analyzed). This indicates that the Danites of Stratum V produced "Galilean" jars locally, and perhaps did so even earlier. We have not checked this by INAA because no "Galilean" jar of Stratum VI was analyzed.

Three collared-rim jars, one from Tel Qasile and two from Tel Mevorakh, have a chemical composition that is local to the coastal region of Tel Mevorakh. This chemical composition was not encountered among the jars from Tel Dan.

Two other chemical groups of five and four jars each, all found at Tel Dan, seem to point to the northern area of Canaan, although we have to be cautious in our interpretation of the INAA data. Two large "Phoenician" pithoi (COLLAR 19 and 20) seem to be related to the northern coast of Canaan.

The remaining collared-rim jars (ten samples, representing eight different chemical compositions) are at present not traceable to their sources. In other words, we do not know the origin of the majority of the collared-rim jars.

Many collared-rim jars "look" alike when the form or even the fabric of the jars is studied. In Locus 4349 at Tel Dan, for example, COLLAR 10, 14, 15, and 16 have a similar appearance, but are chemically entirely different. They belong to four different chemical groups (as shown in Table 2). Therefore, it may be a good idea to restudy the typological characteristics of the collared-rim jars found in Israel according to the shape of the jars, the width of their mouth, their length, their capacity, their body width, and the various potter's practices of joining a wheel-made neck to the handmade body, in the light of the present INAA provenience study. Moreover, it will be important to obtain additional analytical data from other collared-rim jars.

The collared-rim jars found at Sahab (Ibrahim 1978: 117) in Transjordan should be analyzed now that their chemical composition can be compared to the ones that were analyzed at Jerusalem. An answer might then emerge as to whether the jars were an ethnic or socio-economic phenomenon, or a combination of both. We are inclined to believe that these jars were a product of tribal manufacturing during the Iron Age I. This would explain the distribution pattern of the jars, as well as the typological differences encountered within the collared-rim jars family.

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Archaeology in Israel Today: A Summation and Critique

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I must begin with several caveats. First, the papers in this symposium [Special Sessions on the Impact of Recent Archaeological Excavations and Publication on the History of Ancient Israel, Anaheim, CA, Nov. 24, 1985], varied and stimulating as they are, offer but a small and tantalizing sample of the wealth of archaeological fieldwork and exploration in Israel today. In themselves they no doubt form too small a sample on which to base my admittedly far-reaching conclusions, but I use them largely as a point of departure.[1] Second, I am a bit uneasy about focusing my critique so much on Israeli archaeology, especially as our Israeli colleagues are honored guests at this symposium. But I do so out of necessity, since Israelis now clearly dominate the field of archaeology in Israel and have done so for more than a generation. I shall also point out that we Americans and other foreign archaeologists working in Israel are often just as vulnerable to the criticisms I voice. Finally, I hope that these comments and suggestions will be heard not in a negative sense, but rather as part of a long-standing dialogue with our Israeli colleagues, sometimes punctuated by heated controversy, but always friendly, exciting, and unfailingly constructive.

Overall Trends in the Last Fifteen Years: Clear Gains

I have been observing archaeology in Israel closely since 1964, always, I confess, as an inveterate "trend-spotter." I think it is evident to all that archaeology under the aegis of the State of Israel has made enormous strides, especially in the last decade-and-a-half. This progress is perhaps unmatched by any national school of archaeology, and that despite formidable obstacles.

The first significant trend is that there has been a general rise recently in the level of professional and institutional support for archaeology. The Department of Antiquities has been reorganized, the nationwide regional network has been strengthened, and a new and more progressive Antiquities Law has been promulgated. Both the National Museum in Jerusalem and the Ha-Aretz municipal museum in Tel-Aviv have been expanded, and the many smaller local museums continue to prosper and multiply. (There are currently over 100 museums of archaeology, including the related fields of technology, art, ethnography, and local history.)[2]

The Israel Exploration Society has celebrated its 75th anniversary. Its publications grow more impressive, and its annual Succoth meetings continue to draw an audience of several thousand lay people—a spontaneous demonstration of grass-roots support of archaeology that is unparalleled anywhere in the world. The Archaeological Conference in Israel held its 11th annual Spring symposium this year, with more than a hundred M.A. and post-M.A. participants and dozens of learned papers.[3] Moreover, a group of younger archaeologists has now formed a new professional society, the "Israel Association of Archaeologists," something along the lines of our own "Society of Professional Archaeologists" (SOPA), which will certainly provide a lively and healthy challenge to the establishment. There are now not one or two, but four, university institutes of archaeology—Jerusalem, Tel-Aviv, Haifa, and Beersheva—all doing research and fieldwork, as well as granting graduate degrees. In summary, these academic programs, as well as the practical experience and professional opportunities provided by the Department of Antiquities and the many museums and other cultural and educational institutions, guarantee the training and placement of the next generation of Israeli archaeologists and thus the future of the national school. The survival of the foreign schools of archaeology is much more precarious, but that is another matter.[4]

The second recent trend that is clear is the enormous expansion of the scope of fieldwork and research. In addition to the more traditional preoccupation with the Bronze and Iron Ages, Israeli archaeology has now moved more aggressively into long-neglected very early and very late periods, from the Lower Paleolithic, extending even as late as the Medieval and Turkish eras. The horizons have broadened geographically as well, particularly since 1967, due to intensive regional surveys and selective excavations in the Sinai, the Negev, and notably in the West Bank. In the latter area, for instance, the work of Israel Finkelstein, Amihai Mazar, Adam Zertal, and others has absolutely revolutionalized our knowledge of the early phase of the Israelite settlement in the hill country.[5]

Another aspect of the larger conception of archaeology in Israel is the increased role of cooperative (that is, joint American-Israeli) projects. One of the largest and most fully integrated is our own ASOR-Hebrew University project at Tel Miqne, directed by Trude Dothan and Seymour Gitin (reported herein). Others are the Joint Excavations at Sepphoris, which Eric and Carol Meyers co-direct with Ehud Netzer; the work of Amihai Mazar and George Kelm at Tel Batash; and several others. Indeed by now nearly all Israeli digs have a large American contingent of both volunteers and staff, as well as cooperative fund-raising and publication arrangements. The American role is not always equal, which concerns me, but it is significant. If we gain less than we might from these joint ventures, that is the result not of our Israeli colleagues excluding us, but rather of our own lack of fully-trained professionals and of adequate funding. If joint projects are the wave of the future in Israeli archaeology, Americans need to gear up for them.

Finally, as a single example of the recent expansion of archaeology in Israel, I single out Jerusalem, which has become almost a sub-specialty in itself. It is no exaggeration to say that we have learned more of the archaeological history of this key site in the last 15 years than in the previous 150 years put together. This, of course, was done exclusively through the efforts of Israeli archaeologists (too numerous to mention in detail, but especially Benjamin Mazar, Nahman Avigad, and Yigal Shiloh).[6]

Third, a glance at trends in scholarly research in almost any area of archaeology in Israel will reveal a veritable "explosion" of both new evidence and new interpretive theories. Even specialists are threatened with obsolescence, especially those of us not resident in Israel who must commute to try to remain current. So fast is the field moving that yesterday's orthodoxy is today's heresy (or vice versa). Most of the "assured results of scholarship," like those of biblical criticism, must now be challenged. An absolutely critical problem, however, is the rapidly accumulating, overwhelming unpublished data—a vast, largely untapped reservoir. For example, the data-base for all periods is expanding exponentially. Here I can mention only "breakthrough" periods such as prehistory, EB III-IV, the Late Bronze/Iron I horizon, the latest Iron Age phases, the Persian-Hellenistic era, and Roman-Byzantine synagogue sites.[7] One must single out the truly spectacular individual discoveries that illuminate and often transform research on certain topics, such as the study of regional settlement patterns; chronology and international synchronisms; technology and art; religion and cult; and even, belatedly, epigraphy, for at last we are unearthing more representative textual remains. And (dare I mention it here?) even "biblical archaeology" is getting a new lease on life. This is not the now-defunct "biblical archaeology" of the classic era, of course, but a new, truly interdisciplinary inquiry, much more anthropological and sociological, which is producing useful, though sometimes radical, results in the integration of the artifactual and literary data. In my judgment, the "archaeological revolution" in biblical studies heralded by Albright 60 years ago is only now beginning in earnest.[8]

Another trend that I consider especially salutary is the dramatic raising of standards in excavation and recording methods. In the mid-1970s Americans and Israelis were bogged down in a tedious and often polemical discussion of "how to dig," as though drawing sections were the pivotal point. (Some of us who were involved then remember the heat, if not the light, generated by that discussion!) Today that debate is passé; there has emerged a widespread consensus on adapting modern stratigraphic methods and detailed recording systems, as well as the need for a multi-disciplinary approach. Visit the best of the American or Israeli digs, and you will find a remarkable similarity of approach—often a common-sense synthesis of the old and the new in method.[9] Admittedly, there are still some substandard digs, but they are recognized as such. Certainly we in ASOR are policing our own projects through the Committee on Archaeological Policy (CAP), and the Israelis are bringing pressure to bear on their projects.[10] One beneficial factor in the methodological dialogue (sometimes neglected) is the overwhelming adoption of the use of student volunteers in typical "field schools." Having to teach demanding students as we dig has made many of us more self-conscious about method, more exacting of ourselves and our staff, and more open to criticism from other perspectives.

A trend that is difficult to assess fairly is the increasing pressure to publish, which has had mixed success. Despite the discouraging pace of publication noted above, there is at least now a more comprehensive approach to the problem of prompt and full reporting. There are larger and better facilities at the universities and museums: offices, workrooms, storage space, laboratories, and the like. There are also impressive newer organs of publication, such as the journal *Tel Aviv*; the exemplary series *Qedem* for dig reports; and even two new journals, *Mitekufat Ha-even* (for prehistory; not new, but from No. 18 on in English as well as Hebrew); and *Archaeology—Bulletin of the Israel Association of Archaeologists* (Hebrew).[11] Happily, the publications of Israeli archaeology are increasingly in English and thus accessible to a much larger audience. Even more encouraging is the development of what we may call a new professionalism—an "archaeological conscience" that knows all too well that materials unearthened but stored away in a warehouse do not constitute true "data," but remain meaningless bits and pieces of the past, curiosities known to but a few. Archaeologists are aspiring to become responsible scholars, and not mere antiquarians or adventurers; we now face the rigorous discipline of analysis of our data, of integration and synthesis, of presentation to a larger public. One hopeful sign is that many recently begun projects are building in budget, staff, and facilities for publication from the very beginning of fieldwork—the only way to resolve the problem. But we have a very long way to go. For our part, ASOR is cracking down on nonpublishing dig directors, and so are granting agencies such as the National Endowment for the Humanities, the National Science Foundation, and others. We would hope that the Israeli Department of Antiquities would also take a much harder line on all archaeologists, local and foreign, including the suspension of excavation permits, if they fail to publish at least preliminary reports in a reasonable length of time.

Another trend (perhaps too recent to evaluate properly) is what appears to be the passing of a more confrontational generation, which for all its achievements was perhaps overly polemical. The result is that Israeli archaeology today is less dominated by pivotal figures and less polarized between rival institutes. This is not to say that varied and vigorous viewpoints, as well as rivalries, do not still characterize younger Israeli archaeologists (they do), but to note that the controversies are now less personal, more professional. The very fact that the Israeli school is not so monolithic is healthy. I would regard this development as essentially the maturation of Israeli archaeology as a truly professional and academic discipline. (This is in some ways what has also happened to American Syro-Palestinian archaeology, as it has "come of age.")[12]

A final trend, perhaps growing out of several others already noted, is the creation in Israel of an impressive atmosphere of international fieldwork, research, and publication that is unsurpassed anywhere in the world, and certainly unique in the Middle East.[13] My only misgiving is that factors possibly out of the control of any of us in the volatile Middle East could jeopardize this cooperation. In the last few years economic restrictions have cut back several joint projects. And there are always local pressures that may tend to politicize archaeology, even in an enlightened and democratic society like Israel. Perhaps more ominous, however—especially for foreign excavators—is the growing threat posed by ultra-Orthodox religious groups, who if they are appeased could close down almost any dig on the flimsiest of pretexts.[14]

In summary, this preliminary and cursory analysis of general trends in archaeology in Israel over the last several years suggests unmistakably that the Israeli national school, now in its second and third generation, has come of age. The inevitable corollary is that American and other foreign roles are now peripheral. This is probably as it should be. But I would argue that we Americans must remain seriously involved in fieldwork and original research, fully engaged in scholarly dialogue with Israeli archaeologists, perhaps fewer in number but as nearly equal partners as we can manage to be. After all, culturally and spiritually it is our "Holy Land," too, and we have legitimate, if sometimes differing, interests in its past. And now, in addition to our traditional, largely religious motivations, we Americans are increasingly committed to relating ancient Palestine to Americanist archaeology and anthropology, as a fascinating but neglected case-study in socio-economic and cultural evolution. Fortunately, our Israeli colleagues readily recognize and accommodate our peculiar interests. If we Americans lose out in archaeology in Israel, it will only be by default.

Some More Specific Trends, Difficult to Assess

I want to turn now to several specific trends that are more complex and subtle, thereby rendering it difficult to make a balanced judgment, much less a prediction.

The first is the tendency toward employing more multi-disciplinary strategies, in particular the use of specialists in several of the natural sciences, such as geology, geography, and geomorphology; paleo-environmental studies; floral and faunal analysis; physical anthropology; and other disciplines. Such teamwork has long been common practice in prehistory, and the story of how it finally began to have an impact on historical archaeology in Israel in the 1970s has been told elsewhere.[15] Today, both Israeli and American digs typically reflect the newer orientation in research design and makeup of their field staff, as well as increasingly in specialist reports and appendixes in publications, and occasionally in papers delivered by natural scientists at archaeological symposia.

This is all commendable, indeed overdue. Nevertheless, the "new look" is in my judgment somewhat superficial. It is more a pragmatic adaptation to the increased flow of a variety of data through improved retrieval and recording than a true revolution in basic theory and orientation (in Kuhn's terms, simply a "paradigm shift").[16] Most archaeologists still regard the scientific specialists as a convenience, there largely to help confirm their own presuppositions and intuitions. The legitimacy of independent scientific research in archaeology, or the real possibility of alternate explanations of cause-and-effect that might completely overturn our almost exclusively historical reconstructions, are rarely taken seriously by the archaeologist. Proof of this is the *ad hoc* nature of the multi-disciplinary collaboration, as well as the lack of communication across the board. There are few full-scale, explicit research designs (in themselves all too rare in Israel) that develop a joint strategy from the beginning. Staff composition, allocation of resources, and published reports, all reflect the subsidiary role of the allied disciplines. And virtually never are the results of the collaboration of specialists fully integrated. Until they are, much multi-disciplinary archaeology will remain little more than a fad, a half-hearted attempt to appropriate the trappings of the new archaeology without understanding its substance or grasping its truly revolutionary potential.[17]

A second trend, although clear, also exhibits mixed success, namely the "regional approach." Many newer projects, both Israeli and American, feature "regional" somewhere in the title, the proposal, or the promotional materials. But most get no further than a cursory examination of other nearby tells, a few soundings, and a brief geographic-environmental description of the area. Yet the goal of regional archaeology is clearly a comprehensive, detailed settlement history, the placement of all the known sites in a particular zone in their larger natural-cultural setting. Included must be a thorough analysis of changing settlement patterns, land-use, subsistence systems, demography, and the like.

Reaching this goal, of course, would be extraordinarily complex, expensive, and time-consuming—perhaps beyond the resources of most excavators, if we were candid about it. The regional survey, based largely on surface examination, may be a more realistic option, and some of these surveys (noted above) have already proven quite illuminating. Here again, however, the growing popularity of surface surveys, which are by nature regional in scope, seems more a tacit acceptance of restricted budgets than a genuine adoption of a fundamental new method. (Witness, for example, how traditional much of the survey work is, often uninformed by the sophisticated methods developed elsewhere in world archaeology over a very long time.) Whatever may come of the regional trend, it is largely up to the Israelis, since foreign excavators are severely handicapped in this kind of local archaeology.

The third trend may seem surprising, and that is less (rather than more) attention to ethnoarchaeology, one of the hottest of current trends in American New World archaeology. Specifically, there is less interest now than 50 years ago in the folklore that might be most illuminating. Why is this? Part of the reason may be the rapid disappearance of traditional lifestyles under the onslaught of modernization in Israel. Another reason may be the typical Israeli's lack of any perceived connection with Arab villages, much less Bedouin. Also to blame, I suspect, is the common use of the Bible as "ethnography" by both Israelis and Americans, eschewing the more direct, contemporary witness of surviving primitive cultures. This preference betrays our naiveté, as well as our typical Western condescension toward native populations.[18] I would argue that the common assumption of many biblical archaeologists that ancient Israel was somehow unique may also have contributed to the relative lack of cross-cultural and comparative studies. Above all, the characteristic lack of an anthropological orientation in our field has robbed us of trained anthropologists and ethnographers until recently, when it is almost too late. I would suggest to younger archaeologist that some weeks or months spent living in an Arab village or among Bedouin (if that is still possible) may do more to illustrate the actual use of what they dig up than similar time spent looking through volumes of excavation reports for "comparisons."

One unfortunate consequence of our neglect of ethnography is that, despite recent stress on proper stratigraphic digging, many of us remain innocent of any first-hand knowledge of how a typical tell actually forms. Again, we could learn much by close observation in a traditional Arab village of types of domestic construction, reuse, and abandonment; of arts and crafts; of use of space; of animal husbandry and food storage and processing; and much else that may have changed little over the centuries. The irony is that despite our preoccupation with complex tells and how to dig them correctly, we have neglected the processes that formed the archaeological record in the first place.

American archaeologists, familiar only with much simpler, single-component sites, are suddenly discovering through ethnography how important "cultural formation processes" (as they are termed) are.[19] With our unique tell sites and long experience in stratigraphy, Middle East archaeologists should have been pioneering in this research.

A fourth trend of general archaeology today, particularly in America, is only partly manifest in Israel. This is a focus on "cultural resource management," or CRM, as we call it. There are, of course, laws providing for archaeological salvage work in the wake of construction and modern development, as well as other laws protecting antiquities sites and artifacts. But there are, as we all know, inadequate funds and resources to enforce these laws, so priceless evidence is being lost at an alarming rate. The best hope here lies in Israel's unusually enlightened public, with its unparalleled enthusiasm for archaeology. However, the general public attitude in Israel must strike a balance between simplistic nationalist interests in archaeology and the proper recognition of the social and cultural value of the study of the past. Again, this is a local problem, and we foreign archaeologists can only encourage and support our Israeli colleagues, who are often working heroically against incredible odds to preserve the country's unique cultural heritage.

Still another (fifth) strong trend of current archaeology not fully evident in Israel is the use of computers and of statistical analyses in general. To be sure, initial experiments in computerizing basic field recording were carried out by both Israelis and Americans nearly fifteen years ago. But this is only the most rudimentary function of computers, that is, data retrieval and storage. The full potential of the computer is seen only in the manipulation of the data, particularly in sophisticated multi-variate statistical analyses, where patterns may emerge that are simply impossible to discern with old-fashioned mechanical sorting. Still more desirable would be the establishment of a national data-bank for all excavated material, which would be difficult, but technically feasible nonetheless, in so small a country. Such a national data-bank would facilitate comparative study and stimulate the publication of individual excavation projects to a remarkable degree. Yet once again, such projects can only be undertaken by the local authorities, not foreign investigators. Fortunately, Israeli symposia are already airing the issues, and we can only applaud these efforts.[20]

One trend (sixth) that many of my American colleagues and students would regard as essential today is scarcely evident at all in Israel. This is the development of explanatory theory (or indeed of "theory" in any proper sense). To follow the analogy of Willey and Sabloff in their definitive history of American archaeology, Israeli archaeology is still in the "classificatory" or "descriptive" phase, preoccupied with the gathering and preliminary analysis of basic data.[21] This is, of course, the raw stuff with which the archaeology of any region must begin. Progress past this early stage then usually moves to what was called in Europe and America *Kulturgeschichte*, or the direct historical method. Proceeding upon well worked out typological schemes of artifact classification, archaeologists could then compare regional assemblages, with the primary goal of reconstructing culture contact and cultural change. The models employed were usually derived from notions of evolution, cultural diffusion, or supposed ethnic movements/invasions of new peoples. The assumption was that archaeologists could write real history by this means (which often turned out to be a rather narrow sort of political history of great individuals and public events, rather than socio-economic history).

Does this sound familiar? It would describe much of American archaeology in Israel up until a decade ago, and most of Israeli archaeology still today. There is little attention given to anything beyond episodic events, immediate "causes" such as "new peoples" or "new ideology" (politics and religion). There is little advance toward broader explanations of cultural change, much less to a truly processual or nomothetic approach. This particularistic, idiographic orientation is unfortunate, for it disposes us against the search for cultural regularities, for universal principles, for what Braudel and the *annales* school term *la longue durée*.[22]

This relatively unsophisticated approach is now gradually giving way, however, to much more ambitious attempts to address the phenomenon of long-term cultural evolution, so dramatically evident in the complex history of Middle Eastern countries like Israel. If nothing else, the environmental and multi-disciplinary orientation, which we nearly all take for granted today, is going to force us toward broader kinds of archaeological explanations than those previously advanced. It is crucial to remember that the choice is not between becoming anthropologists or historians, but rather between competence and incompetence. We need scholars in both fields who are adequately equipped to interpret the rich archaeological evidence that we actually have.

A final comment in this connection. Our discipline is in a state of chaos and crisis precisely because we now have a bewildering array of information, but few guiding principles for organizing research, few models for interpreting and integrating the data. We will make progress, not by accumulating more and more miscellaneous facts, but rather by developing a coherent, explicit conceptual framework into which we can fit facts, at least experimentally. That is all that we mean by "theory" (not merely "speculation," as some think). The painful lack of such formulations has kept Palestinian and biblical archaeology far behind other branches of archaeology. Without rigorous intellectual foundations, without a distinctive method, our field of inquiry cannot develop as an academic discipline, much less as a science.[23]

That brings me to the final (seventh) trend at this point, the growth of professionalism. Israeli archaeology in one sense has always been a professional enterprise, rather than a largely amateur pursuit, as American Palestinian and biblical archaeology was for most of its history until recently. That is, Israeli archaeology has been an autonomous and recognized academic discipline, with its own specialized methods and objectives, as well as support for full-time positions. In Israel, Palestinian archaeology has never been, as it was for so long in this country, a branch of biblical and theological studies—an ancillary and subordinate field. Today, as from the beginning, the institutes of archaeology in all the Israeli universities are entirely separate from departments of Bible, Judaism, Semitic languages, or Ancient Near Eastern history. And archaeology is still more remote from the Israeli religious establishment, in any form. Its independence has given Israeli archaeology the strength of a privileged position, and it has also spared it the trauma and growing pains peculiar to American biblical archaeology as the latter has evolved slowly toward professional status. But in the process, the Israeli school may have become too independent, and therefore somewhat parochial. The national school is, of course, isolated tragically but unavoidably from the rest of Middle Eastern archaeology by geography and politics. But it can and must break through strictly local barriers of academic and institutional provincialism in order to become truly interdisciplinary, as the best of archaeology elsewhere in the world is today. Oddly enough, there is a real danger that Israeli archaeology will become too complacent—not lively and controversial enough—if it does not have the stimulation provided by interaction and even competition with other disciplines.

Professionalism, then, may be a mixed blessing. But among its many advantages are some that we Americans now enjoy, and which I covet for Israeli archaeology as well. I am thinking, for instance, of the necessity to develop explicit, detailed research designs such as we all must now write, in order to justify our projects to our universities, and especially in competitive grant proposals for outside funding agencies. This is a painful but immensely rewarding exercise. And not the least beneficial part of the process is the open peer-review that we must undergo in all grant proposals, if we are to remain in the mainstream of archaeology. It is just this kind of rigorous review that ASOR's Committee on Archaeological Policy also now requires of all its prospective projects, and the research design of the proposal is what we look at most closely. I would like to see all Israeli proposals for an excavation license subjected to similar scrutiny, especially with regard to the project's precise aims, methods, staff, strategy, and publication plans.[24]

Conclusion

This résumé has focused largely on Israeli archaeology, in the form, I hope, of friendly and constructive criticism from an American perspective. What is it, after all, that we want from Israeli archaeology? It is not just fascinating, but largely chance discoveries, even when they happen to illuminate the Bible. First, we hope in the near future to see the resolution of certain specific chronological, historical, and cultural problems. Among the urgent issues are such matters as: (1) the rise of complex society in the Neolithic-Chalcolithic era; (2) the question of the growth of urbanism in the Early Bronze Age; (3) the "Dark Age" in EB IV; (4) the relation of Palestine to Greater Canaan in the Middle and Late Bronze Ages; (5) the Israelite settlement in the larger context of the Late Bronze/Iron I cultural horizon; (6) the background of the Assyrian and Babylonian destructions; (7) the advent of Classical culture in the Levant; and (8) the context of the origins of early Judaism and Christianity.

But, most of all, we hope for the illumination of larger issues, for all periods, among them: (1) climate and ecological setting; (2) subsistence and food production systems; (3) settlement types and patterns; (4) demography; (5) variants in material culture and regionalism; (6) material culture and "ethnicity"; (7) ceramic technology and social structure; (8) all aspects of art and technology; (9) religion and cult; and (10) trade and international relations.

In short, what we really want to know from archaeology in Israel is: "What was life like in antiquity, in this time and place and social setting?" And, further: "What can we learn from that of universal human nature, experience, and destiny?" This is an unabashedly humanistic approach to archaeology. I am not suggesting that we adopt the "new archaeology" completely and uncritically. Indeed, a more truly historical archaeology is required today. But let it be history in the best, the largest, the most genuinely humane context. For archaeology can contribute uniquely to the history, not simply of material culture, but also to the history of social institutions, of ideas, and ultimately of the question of Man in his environment. We warmly welcome our Israeli colleagues to this symposium, and we wish them *qôl ha-kavōd* in that quest.

Notes

[1] This article contains substantially the remarks I prepared in advance of the symposium, not having seen the other papers. I therefore did not respond directly to the other papers except in passing, either orally, or in this format. I stress that these comments are simply a general critique, not a summation of the symposium.

[2] A forthcoming catalog by ASOR Trustee Joy Ungerleider-Mayerson will provide a detailed guide to these museums.

[3] See reports in the *Israel Exploration Journal* 35 (1985) 205, 206; and previous reports in the same journal.

[4] See, for instance, Dever 1982; 1985: 61–63; and In press b.

[5] See provisionally Stager 1985; Dever 1987, 1988, and In press a (the latter with full references).

[6] See especially the latest, full reports in Avigad 1980; Ben-Dov 1982; Shiloh 1984; and compare also the older summary of Yadin 1975.

[7] On new data for the various periods, see, for instance the papers in the present volume by Biran, M. Dothan, T. Dothan and Gitin, Shiloh, and Stern. The only recent overall survey, albeit brief, is Shanks and Mazar 1985.

[8] See Dever 1986; 1987; and 1988; and In press b.

[9] On this consensus see Ussishkin 1982; Bar-Yosef and Mazar 1982; Dever 1985 47–53; In press b. On the development of the "new archaeology," see Dever 1981.

[10] For the story of CAP, see *ASOR Newsletter* 38/3 (1987) 11–12, which, however, gives insufficient credit to founder and first Chairman, Edward F. Campbell.

[11] We have referred above to the latter association, a new professional society of younger archaeologists in Israel.

[12] See Dever 1985: 36–48; In press b.

[13] In the eastern Mediterranean as a whole, only Cyprus and Jordan would provide a similarly open atmosphere, and even there we have very few joint projects.

[14] As this volume goes to press, word has reached the United States of the Jerusalem *haredi* (ultra-Orthodox) community's forcing ASOR's Excavations at Caesarea Maritima under Director Robert J. bull to abandon an area where they claimed falsely that Jewish burials were being disturbed. This is an exceedingly dangerous precedent. Israeli projects, like the City of David excavations, have successfully resisted demonstrations by the Orthodox for several years, but foreign excavations are particularly vulnerable, and now more so.

[15] See Dever 1981; 1985: 39–40; In press b.

[16] See Dever In press b and references there.

[17] Compare further Dever 1981: 18–22 on the naiveté of much of our borrowing from New World archaeology.

[18] Compare the perceptive comments of Glock 1985.

[19] See now the recent work of my colleague at Arizona, Michael Schiffer (1987). In our field, there is only the recent treatment of Arlene Rosen (1986), from a geomorphological and sedimentological perspective. Rosen and I are now collaborating on a forthcoming article for Schiffer's series of volumes, *Advances in Archaeological Theory and Method.*

[20] In the Spring of 1985, the Iron Age Interregional Research Group in Israel held the first such symposium.

[21] See especially Willey and Sabloff 1974: 172–all; and compare the application of their analysis to our field in Dever 1981; 1985: 49–52.

[22] See further Dever In press b.

[23] For a forthright plea for "theory," see further Dever In press b.

[24] The Archaeological Council in Israel does, of course, require brief proposals, and it does make some attempt to enforce publication of preliminary reports before renewing licenses. But the point is that much more needs to be done, as I think most of us would agree.

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